

**EXHIBIT 236**  
**TO THE DECLARATION OF ELISE M. BLOOM IN**  
**SUPPORT OF DEFENDANTS' MOTION FOR**  
**PARTIAL SUMMARY JUDGMENT**

**REDACTED VERSION OF DOCUMENT SOUGHT**  
**TO BE SEALED**

**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA, SAN FRANCISCO DIVISION**

<p>AARON SENNE, et al.,</p> <p>Plaintiffs,</p> <p>vs.</p> <p>OFFICE OF THE COMMISSIONER OF BASEBALL, an unincorporated association doing business as MAJOR LEAGUE BASEBALL, et al.,</p> <p>Defendants.</p>	<p>Case No. 1:14-cv-00607-JCS</p> <p><b>SUPPLEMENTAL REBUTTAL REPORT OF DENISE N. MARTIN, PH.D.</b></p>
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September 27, 2021

## I. Qualifications

1. I have personal knowledge of the facts set forth herein, except as otherwise specified. If called as a witness, I could and would testify to the matters stated herein.
2. I have previously submitted several reports in the above-captioned matter;
  - a. Declaration of Denise N. Martin, Ph.D. in Support of Defendants' Opposition to Plaintiffs' Motion for Class Certification (4/4/2016);
  - b. Supplemental Declaration of Denise N. Martin, Ph.D. in Support of Defendants' Opposition to Plaintiffs' Motion for Class Certification (4/24/2016);
  - c. Expert Report of Denise N. Martin (8/16/2016); and
  - d. Declaration of Denise N. Martin, Ph.D. in Support of Defendants' Opposition to Plaintiffs' Renewed Motion for Class and Collective Certification (10/14/2016).
3. I earned a B.A. in Economics from Wellesley College and an M.A. and Ph.D., also in Economics, from Harvard University. I am currently a Managing Director at NERA Economic Consulting ("NERA") and have been employed by the firm since 1991. I have been retained as an economic expert on more than 200 class actions, including wage and hour class actions, discrimination class actions, consumer class actions and securities class actions. In the course of the wage and hour assignments, I have frequently been asked to assess allegations of failure to pay minimum wage and overtime, drawing on my education and experience as a labor economist and statistician. My work in such matters has included evaluations of formulaic methods proposed to estimate alleged damages, including formulas that rely on survey data. My undergraduate and graduate education included coursework on surveys and statistical sampling. While at NERA, I have been asked to evaluate sampling methods and surveys conducted in wage and hour litigation for their reliability.
4. My CV is included as **Exhibit A**.
5. NERA is being compensated for my time in this matter at my customary hourly rate of \$1,050. Members of my team who have provided assistance in this matter are also being billed by NERA at their customary hourly rates. Neither NERA's compensation, nor my own, is in any way contingent upon the outcome of this proceeding.

## II. Assignment and Summary of Opinions

6. For purposes of this report, I was asked to review the Supplemental Expert Report of Brian Kriegler, Ph.D. (the “Kriegler Supplemental Report”) and to assess whether the estimates of alleged damages he puts forth are reliable. Dr. Kriegler estimates alleged damages for the Florida and Arizona classes (which are limited to Spring Training, Extended Spring Training and the Fall Instructional League (the “Training Seasons”)); the California class (which is limited to players who played in the California League for at least seven consecutive days during the 2010-2019 Championship Seasons); and the Fair Labor Standards Act (“FLSA”) collective, as well as for the claims of 45 individual plaintiffs (“Named Plaintiffs”) (collectively, “Plaintiffs”).<sup>1</sup>
7. More specifically, I was asked to evaluate the reliability of Dr. Kriegler’s estimates of the number of purported “Hours Worked” for which he asserts that class members and the Named Plaintiffs should have been but were not paid at least the applicable minimum wage and/or overtime pay.<sup>2</sup>
8. In Table 2 of the Kriegler Supplemental Report, Dr. Kriegler provides a list of “Data Sources Used to Calculate Damages.” The list includes three categories:
  - a. Verifiable Historical Records (*e.g.*, MLB’s transactional database (eBis), training season schedules, and Spring Training and Fall Instructional League rosters);
  - b. Publicly Available Data (*i.e.*, MiLB website, minor league teams’ websites and Google Maps); and
  - c. Representative Evidence (*i.e.*, Minor Leaguers’ Survey Data, Stratified Random Sample of Itineraries and Testimony from the 45 Plaintiffs).
9. The “Verifiable Historical Records” are not used by Dr. Kriegler to estimate purported “Hours Worked.” The “Publicly Available Data” is used only to estimate game durations and travel time to and from the games during the Championship Season.

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<sup>1</sup> The California League consists of eight to 10 minor league teams in Class A Advanced that competed against each other in the Championship season. The affiliates that belonged to the California League during the relevant Championship Seasons are Visalia Rawhide, Stockton Ports, San Jose Giants, Modesto Nuts, Rancho Cucamonga Quakes, Lancaster JetHawks, Inland Empire 66ers, and Lake Elsinore Storm Bakersfield Blaze and High Desert Mavericks. The latter two teams were not part of the California League in the years 2017-2019.

<sup>2</sup> Kriegler Supplemental Report, ¶¶ 18-19.

10. From his “Representative Evidence” list, the only source used to estimate all the remaining “Hours Worked” (that is, all “Hours Worked” during the Training Seasons and all the “Pre-Game Hours Worked” and “Post-Game Hours Worked” during the Championship Season) is the “Minor Leaguers’ Survey Data,” which is data from the Main Survey conducted by J. Michael Dennis.<sup>3</sup> To be clear, the “Stratified Random Sample of Daily Itineraries” and the “Testimony from the 45 Plaintiffs” are not used by Dr. Kriegler to estimate purported “Hours Worked”; they are only used in his purported validation of estimates generated using the survey data.
11. In fact, Dr. Kriegler does not rely on the complete set of respondents from the Main Survey to estimate purported “Hours Worked” but, instead, on a subset of respondents who played in the Spring Training or Extended Spring Training in 2015 or 2016 and/or in the Championship Season and Fall Instructional League in 2015 and who did not opt-in to the FLSA collective (“the Kriegler Subset”).<sup>4</sup> As a result:
- a. The survey responses from the Kriegler Subset are the *only* source of data for Dr. Kriegler’s estimate of purported “Hours Worked” for the Florida and Arizona classes, as well as for the FLSA collective and the Named Plaintiffs during the Training Seasons.<sup>5</sup>
  - b. The survey responses from the Kriegler Subset, are the *only* source of data for Dr. Kriegler’s estimate of purported “Pre-Game Hours Worked” and “Post-Game Hours Worked” for the California Class, as well as for Named Plaintiffs or members of the FLSA collective who played for the California League during the 2010-2019 Championship Seasons. To estimate total purported “Hours Worked,” Dr. Kriegler adds game hours from MiLB’s website and travel times to and from

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<sup>3</sup> Declaration of J. Michael Dennis in Support of Plaintiffs’ Motion to Reconsider (the “Dennis Reconsideration Declaration”).

<sup>4</sup> Dr. Kriegler references the Kriegler Subset as consisting of 245 respondents, which is incorrect (Kriegler Supplemental Report, ¶104). As described more fully below, the Kriegler Subset includes responses from at most 232 respondents about Spring Training (for 2015 and 2016), 92 respondents about Extended Spring Training (for 2015 and 2016), 59 respondents from the Fall Instructional League (for 2015 only) and 154 respondents about the Championship Season (for 2015 only).

<sup>5</sup> Dr. Kriegler also estimates purported “Hours Worked” for the Named Plaintiffs during the Off-Season, solely on the basis of their declaration and deposition testimony.

those games estimated using Google Maps to his estimates of “Pre-Game Hours Worked” and “Post-Game Hours Worked” from the survey.

12. On the basis of my review and analysis in this matter, as well as my education and experience, I concluded that Dr. Kriegler’s methodology does not generate a reliable estimate of any “Hours Worked” or, therefore, of any classwide damages, any damages to the members of the FLSA collective, or any damages to any of the Named Plaintiffs.
13. In addition to reviewing information about the Main Survey in the Dennis Reconsideration Declaration and about the Kriegler Subset in the Kriegler Supplemental Report, I have now had an opportunity, via deposition testimony provided by Dr. Dennis and Dr. Kriegler, to confirm the following:
  - a. Despite evidence in the record (including in my prior reports) indicating that significant differences are found in the Main Survey across teams in survey responses to questions regarding “Hours Worked,” as well as among responses given by members of the same team about the same season, neither Dr. Dennis nor Dr. Kriegler considered or analyzed this variability.
    - i. Dr. Dennis testified that he designed the Main Survey to estimate purported “Hours Worked” at the nationwide level, not at the team or league level.<sup>6</sup>
    - ii. The “validation” that Dr. Dennis performed compared purported “Hours Worked” estimated using the Main Survey to purported “Hours Worked” reflected in a few daily team itineraries and to testimony on purported “Hours Worked” from individuals he believed to be Rule 30(b)-6 witnesses but who were not.
    - iii. The “validation” that Dr. Kriegler performed compared the purported “Pre-Game Hours Worked” estimated using the survey responses from the

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<sup>6</sup> Dennis Deposition (Rough) Transcript: 41:20-42:8 (“Well, I mean, actually my goal is to produce the national level estimates for hours worked for the minor league baseball players. That was my goal. I did not have the objective of designing the survey to produce subgroup estimates, it’s simply useful to look at the data by different subgroups to the extent that that helps answer any mythological [methodological] questions about possible bias in the survey. In terms of my assignment, Counsel, I want to be clear that my goal was to have a national survey that could speak to the entire class of almost 15,000 individuals.”). See also Dennis Deposition (Rough) Transcript 42:9-43:5.

Kriegler Subset to purported “Pre-Game Hours Worked” estimated using a sample of team itineraries (including just a single itinerary from the California League from 2015, and none of the potential California League respondents in the Kriegler Subset played for that affiliate in 2015) and using testimony from Named Plaintiffs.

- iv. Neither of these “validations” were performed at the team level (that is, neither compared survey responses by team to itineraries by team or testimony by team.) Rather, each considered survey responses in aggregate and itineraries in aggregate.
  - v. Neither of these “validations” included statistical tests but, instead, relied solely on a perceived visual similarity.
  - vi. While customary in academics and generally required for litigation data based on samples, especially when the data are collected through a survey, neither Dr. Dennis nor Dr. Kriegler calculated standard errors or confidence intervals around their estimates of purported “Hours Worked.”<sup>7</sup>
- b. The Kriegler Subset of the Main Survey, on which Dr. Kriegler relies, has zero or few respondents from each team in each season. Critically, the Kriegler Subset includes only nine or 10 responses (depending on the question) from individuals who even potentially played in the California League during the 2015 Championship Season, and these individuals played for only half of the California League affiliates. Further, because eight of the potential California League respondents also played for other affiliates during 2015, it is not possible to know whether their responses were about their time in the California League.
  - c. Despite evidence in the record indicating that non-baseball activities, as well as individualized baseball-related activities performed voluntarily, were undertaken by Plaintiffs between the time they arrived at and departed from their

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<sup>7</sup> See David H. Kaye and David A. Freedman (2011), “Reference Guide on Statistics” in *Reference Manual on Scientific Evidence*, 3<sup>rd</sup> Edition, pp. 243-246 and Shari Seidman Diamond (2011), “Reference Guide on Survey Research,” in *Reference Manual on Scientific Evidence*, 3<sup>rd</sup> Edition, pp. 415-416.

facility/stadium, neither Dr. Dennis nor Dr. Kriegler attempted to estimate alleged “Hours Worked” based solely on team-related activities. Instead, in developing his estimates of purported “Hours Worked,” Dr. Kriegler simply assumes that, except for meal times reported in the survey, Plaintiffs were engaged in compensable, team-related baseball activities every minute between their reported arrival and departure times.<sup>8</sup> Importantly, no questions were asked about the time spent on team-related activities in the Main Survey.

14. On the basis of my review and analysis of the Krieger Supplemental Report, as well as data from the Kriegler Subset, I have reached the following conclusions:

- a. While Dr. Kriegler testified that he had no reason to consider the survey data at the team level given anticipated “commonalities” and “homogeneity” in activities across teams, the responses in the Kriegler Subset demonstrate pronounced variability, even among respondents who played on the same team during the same season. This “across team” and “within team” variability is found when analyzing responses for the Training Seasons and for the Championship Season both in and out of the California League. As discussed further below, Dr. Kriegler cannot know whether this variability occurred because: (i) the respondents on the same team played for different affiliates at different skill levels with different expectations about “Hours Worked”; (ii) the respondents differed in the amount of non-baseball activities or voluntary baseball-related activities they engaged in between their reported arrival and departure times at the facility/stadium; and/or (iii) the survey design was flawed. Moreover, while Dr. Kriegler asserts that he has controlled for this variability by using the 10<sup>th</sup> Percentile or 25<sup>th</sup> Percentile responses from the survey in his analysis, he merely masks these problems by throwing away 75% or 90% of the survey responses from the Kriegler Subset. He still has no way to evaluate whether the purported “Hours Worked” estimated at these arbitrary points are reliable estimates of hours spent on team baseball-related activities across all classes and the Named

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<sup>8</sup> Kriegler Deposition (Rough) Transcript 93:25-95:25.



Plaintiffs. Further, the variability by team persists when the data is analyzed at the 10<sup>th</sup> Percentile and 25<sup>th</sup> Percentile.

- b. In light of this variability, the purported “validations” of the Main Survey and Kriegler Subset conducted by Dr. Dennis and Dr. Kriegler, respectively, that were not done at the team level are not validations at all. Dr. Kriegler should have conducted a team level comparison to even begin to understand the sources of the variability in survey responses and whether it is possible, given that variability, to generate a reliable estimate of “Hours Worked” for all classes and the Named Plaintiffs. Digging into his backup, we find that, for example, Dr. Kriegler has a single California League itinerary from 2015 and none of the potential California League respondents in the Kriegler Subset played for that affiliate in 2015. Further, Dr. Kriegler’s analysis includes errors that call into question even the purported visual similarity of his comparison at the aggregate level. Our comparison, performed at the team level, shows that there is *no* statistical correlation between the purported “Hours Worked” estimated using either the Main Survey or the Kriegler Subset and the purported “Hours Worked” estimated using sampled itineraries or obtained from Named Plaintiff testimony. As such, no validation of the survey exists.
- c. While Dr. Dennis testified in his deposition that, in his opinion, reliable statistical estimates could only be generated with at least 25 responses, the Kriegler Subset often includes very few or even zero respondents from a particular team during a particular season.<sup>9</sup> This issue is particularly pronounced in the California League, where the Kriegler Subset has at most nine or 10 respondents. For eight of them, it is not possible to tell whether their survey responses are about their experiences in the California League because they played for more than one affiliate in 2015. Were the data to be examined at the affiliate level, which Dr. Dennis did not track in his survey, his subset would contain even fewer observations for each team.

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<sup>9</sup> Dennis Deposition (Rough) Transcript 132:15-133:17.

- d. The pronounced variability across and within teams and Dr. Kriegler's often small samples by team and season are problematic in combination.
  - i. Dr. Kriegler is unable to provide an assurance that his estimates of purported "Hours Worked" capture the underlying variability by team. As such, he can provide no assurance that his results are representative of the classes, the FLSA collective, or the Named Plaintiffs.
  - ii. Given the variability across teams, Dr. Kriegler should be using California League respondents to generate his estimates of purported "Hours Worked" during the Championship Season. However, as noted, the Kriegler Subset includes only nine or 10 respondents who are even potentially providing responses about their time in the California League in 2015. Further, the responses are quite variable, even for respondents on the same team. This variability in responses during the Championship Season is not limited to California League teams: it is also found outside the California League. Again, Dr. Kriegler does not know—because he did not consider—the source of this variability, which might be based on different expectations about "Hours Worked" at different skill levels; differing amounts of non-baseball activities or voluntary baseball-related activities; or the flawed survey design. Given this variability, however, it is clear that a reliable estimate of any purported "Hours Worked" during the Championship Seasons in the California League cannot be estimated using the 10<sup>th</sup> or 25<sup>th</sup> Percentile across all respondents in the Kriegler Subset, without consideration of team or affiliate. It is also clear that, given the small numbers of respondents by team and the fact that it is impossible to discern whether eight of those respondents provided answers about their experiences in the California League, a reliable estimate also cannot be generated using the subset of potential respondents from the California League.
- e. The variability reflected in the responses for the Main Survey, as well as the Kriegler Subset, would not be expected if players were only at a facility/stadium

at the direction of management to conduct the team baseball-related activities reflected in daily itineraries. Were that the case, much more uniformity would be expected. The existence of pronounced variability is consistent with testimony that the arrival and departure time at the stadium was not necessarily dictated by the need to perform “work” but, instead, reflected time spent voluntarily and/or time that did not involve baseball-related activities. Because no questions about team-related activities were asked in the survey, it would not be possible to use the responses in the survey to estimate “Hours Worked” limited to these team-related activities.

15. Other problems with the Main Survey were identified by Eugene Ericksen, an Emeritus Professor of Sociology and Statistics at Temple University and Special Consultant with NERA, who concluded that “[t]he methodology Dr. Dennis used for his Main Survey is flawed and his survey does not provide reliable data on which plaintiffs’ ‘hours worked’ estimates can be based.”<sup>10</sup> As Professor Ericksen explains in his declarations, responding to the survey was cognitively burdensome, as the questions in the survey required respondents to recall details about events that happened years before the survey was conducted and, in many cases, were difficult to process and answer.<sup>11</sup> He concluded that, because of the burdensome nature of the questions, respondents would have resorted to “satisficing,” a technique where they select a response option without doing the cognitive work to determine whether the answer is the correct one.<sup>12</sup> Further, he concluded that respondents who thought they had more to gain from the lawsuit would be more likely to participate in the survey, generating biased results.<sup>13</sup> Lastly, Professor Ericksen also concluded that Dr. Dennis did not establish that his survey was representative of the

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<sup>10</sup> Declaration of Eugene P. Ericksen in Support of Defendant’s Motion to Exclude the Declaration and Testimony of J. Michael Dennis, Ph.D., dated September 14, 2016. (“Ericksen September 2016 Declaration”), ¶ 9.

<sup>11</sup> Ericksen September 2016 Declaration, ¶¶ 13, 19-21; Supplemental Declaration of Eugene P. Ericksen, Ph.D. in Support of Defendant’s Motion to Exclude the Declaration and Testimony of J. Michael Dennis, Ph.D., dated October 28, 2016. (“Ericksen October 2016 Declaration”), ¶¶ 4, 18-24; *See also*: Declaration of Eugene P. Ericksen, Ph.D. in Support of Defendant’s Opposition to Plaintiffs’ Motion for Class Certification Under Federal Rule of Civil Procedure 23, dated April 4, 2016. (“Ericksen April 2016 Declaration”), ¶¶ 34-50.

<sup>12</sup> Ericksen September 2016 Declaration, ¶¶ 13, 21-24; Ericksen October 2016 Declaration, ¶¶ 7, 24-29. *See also*: Ericksen April 2016 Declaration, ¶¶ 34-35.

<sup>13</sup> Ericksen September 2016 Declaration, ¶¶ 14-15, 44-48. Ericksen October 2016 Declaration, ¶¶ 8, 31-33.

population to which he generalizes his results, *i.e.*, class members.<sup>14</sup> As a result, his survey is likely to suffer from non-response bias.<sup>15</sup>

16. I reviewed the survey responses for the Kriegler Subset and find evidence consistent with these additional critiques of the Main Survey offered by Professor Ericksen.

- a. Evidence that respondents may have been confused by the questions are found, *e.g.*, in a review of reported arrival times for Away Games during the Championship Season. Dr. Dennis' survey asks respondents about their arrival time "at their stadium or the opposing team's stadium." The wide range of reported arrival times for Away Games indicates that, to the extent they were not just satisficing, some respondents reported their arrival time at their own stadium to travel to the game, while others reported their arrival time at the opposing team's stadium. To the extent respondents were answering about their arrival at their own stadium, travel time would be embedded in their responses, making Dr. Kriegler's addition of this time an overestimate, but to an unknowable degree. Removing estimated travel time reduces Dr. Kriegler's estimate of alleged damages for the California class and for the Named Plaintiffs by more than 35%.
- b. Evidence that respondents found the survey cognitively burdensome is found by observing that the question response rates dwindled as the survey went on. As described in Dr. Ericksen's Supplemental Declaration, respondents' propensity to skip questions increased as they got further into the questionnaire.<sup>16</sup> I have repeated this analysis for the respondents in the Kriegler Subset and found the pattern remains.
- c. Evidence that the Kriegler Subset is not representative of the population is found by comparing the proportion of those invited to participate in the survey who have foreign residences (42.2%) with the proportion amongst those who elected to respond (9.5%). The proportion of players in the Kriegler subset from the Dominican Republic and Venezuela who completed the survey (6.3%) is also

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<sup>14</sup> Ericksen April 2016 Declaration, ¶¶ 9-10.

<sup>15</sup> Ericksen September 2016 Declaration, ¶¶ 14-15, 44-47; Ericksen October 2016 Declaration ¶¶ 8-10, 31-38.

<sup>16</sup> Ericksen October 2016 Declaration, ¶29.

below the proportion from these two countries who were invited to the complete the survey (34.4%). These foreign players comprise a substantial proportion of the classes yet are seriously under-represented in the sample. Dr. Dennis acknowledged in his deposition testimony that he was aware that these players would be less likely to respond and yet he did not investigate this potential source of bias in his non-response analysis.<sup>17</sup>

17. Dr. Kriegler's proposed formulaic measure of purported "Hours Worked" does not address these underlying problems with the responses in the Kriegler Subset, which necessarily further infect his analysis, rendering his estimates of alleged damages additionally unreliable.
18. The Kriegler Subset of the Main Survey data provided by Dr. Dennis is critical to Dr. Kriegler's methodology. It is the sole basis for 100% of the purported "Hours Worked" entering into his estimation of alleged damages for the Arizona and Florida classes, as well for the Training Seasons for the FLSA collective. It is also the basis for 48% and 51% of the purported "Hours Worked" entering into his estimation of alleged damages for the Championship Season, depending on whether 10<sup>th</sup> Percentile or 25<sup>th</sup> Percentile survey hours are used. Without the hours from the survey, Dr. Kriegler's formulaic approach would generate no alleged damages for the Arizona and Florida classes or Training Season damages for the FLSA collective. Further, his estimates of alleged damages for the California class and for the Named Plaintiffs would be reduced by more than 90%.

### III. Materials Relied Upon

19. A list of materials relied upon in the preparation of this report is included as **Exhibit B**.

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<sup>17</sup> Dennis Deposition (Rough) Transcript, 140:22 - 142:7.

#### **IV. The Data Used by Dr. Kriegler to Estimate Purported “Hours Worked” Comes Primarily from the Survey Responses in the Kriegler Subset**

20. In Table 2 of the Kriegler Supplemental Report, Dr. Kriegler provides a list of “Data Sources Used to Calculate Damages.” The list includes three categories:
- a. Verifiable Historical Records (*e.g.*, MLB’s transactional database (eBis), training season schedules, and Spring Training and Fall Instructional League rosters);
  - b. Publicly Available Data (*i.e.*, MiLB website, minor league teams’ websites and Google Maps); and
  - c. Representative Evidence (*i.e.*, Minor Leaguers’ Survey Data, Stratified Random Sample of Itineraries and Testimony from the 45 Plaintiffs).
21. While this list of sources spans nearly two pages, the sources that Dr. Kriegler uses to estimate purported “Hours Worked” is much more limited. To begin, he does not use any of the sources in the “Verifiable Historical Records” category (which is by far the largest) to estimate purported “Hours Worked.” Instead, these sources are used to determine inputs such as the start and end dates for the Training Seasons and the roster of players for those seasons.
22. The sources within Dr. Kriegler’s “Publicly Available Data” category are used only to estimate game time and travel time to and from the games during the Championship Season. Specifically, he obtains game times from the MiLB website. For away games, he uses Google Maps to estimate travel time to and from the opposing team’s stadium, assuming the players leave from their own facility. Importantly, it is only in the Championship Season that he develops a separate estimate of game time and travel time. During the Training Seasons, game time and travel time are just some unspecified part of Dr. Kriegler’s purported “Hours Worked.”
23. From his “Representative Evidence,” the only source used to estimate all of the remaining “Hours Worked” (that is, *all* “Hours Worked” during the Training Seasons and *all* “Pre-Game Hours Worked” and “Post-Game Hours Worked” during the Championship Season) is the “Minor Leaguers’ Survey Data”, which is the Main Survey

conducted by J. Michael Dennis.<sup>18</sup> To be clear, the “Stratified Random Sample of Daily Itineraries” and the “Testimony from the 45 Plaintiffs” are not used by Dr. Kriegler to estimate purported “Hours Worked.” They are only used in his purported validation of the estimates he generates using the survey data.<sup>19</sup> He does not attempt to develop separate estimates of purported “Hours Worked” using either the itineraries or the testimony of Named Plaintiffs.

24. Importantly, as noted, Dr. Kriegler does not rely on the complete set of respondents from the Main Survey to estimate purported “Hours Worked.” Instead, he relies on survey responses from the Kriegler Subset, a subset of respondents who played during Spring Training or Extended Spring Training in 2015 or 2016 and/or in the Championship Season and Fall Instructional League in 2015 and who did not opt-in to the FLSA collective. More specifically:

- a. The survey responses from the Kriegler Subset are the *only* source of data for Dr. Kriegler’s estimate of purported “Hours Worked” for the Florida and Arizona classes, as well as for the FLSA collective and the Named Plaintiffs during the Training Seasons.
- b. The survey responses from the Kriegler Subset, are the *only* source of data for Dr. Kriegler’s estimate of purported “Pre-Game Hours Worked” and “Post-Game Hours Worked” for the California Class, as well as for Named Plaintiffs or members of the FLSA collective who played for the California League during the 2010-2019 Championship Seasons. As noted, to estimate total purported “Hours Worked,” Dr. Kriegler adds game hours from MiLB’s website and estimated travel times to and from those games estimated using Google Maps to his estimates of “Pre-Game Hours Worked” and “Post-Game Hours Worked” from the survey.

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<sup>18</sup> Declaration of J. Michael Dennis in Support of Plaintiffs’ Motion to Reconsider (the “Dennis Reconsideration Declaration”).

<sup>19</sup> While Dr. Kriegler does not list testimony from Defendants on his list of Representative Evidence, as discussed further below, Exhibit 10a-d in his report includes selected testimony from Defendants’ witnesses.

## **V. The Variability in Survey Responses Across and Within Teams Demonstrates the Unreliability of Dr. Kriegler's Estimates of Purported "Hours Worked"**

25. Despite evidence in the record (including in my prior reports) indicating that significant differences exist in survey responses to questions regarding "Hours Worked" across teams, as well as among responses given by members of the same team about the same season, neither Dr. Dennis nor Dr. Kriegler even considered, let alone incorporated into their opinions, this variability. In fact, both testified that conducting an analysis at the team level was not important or appropriate given their assumptions regarding commonalities amongst minor leaguers on different teams. For example, when asked whether they ever looked to see whether the players who played for the same team during the same season, they responded both that it wasn't necessary and (in the case of Dr. Dennis) that the sample sizes by team would have been small. In particular, Dr. Dennis responded:

"It's accurate, and accurate for a good reason; those sample sizes would be pretty small. Somewhere in my expert report—I think it might be in the nonresponse bias analysis part – I have a list of the number of interview completions by major league team. As I recall, some of those teams had as few as ten interviews. I think other teams had maybe around 25 interviews. So those are small sample sideses [sizes], in my view that would not support a quantitative analysis at the team level."<sup>20</sup>

26. Dr. Kriegler testified as follows:

"Several reasons. For starters, the evidence that I've seen suggests to me that minor leaguers have a lot more - - there's a lot of homogeneity and similar all right in terms of what they do. Within organizations and across organizations there's estimates in terms of what they're expected to do, there's similarities in terms of when they are expected to arrive, or by when they're expected to arrive. And given the way that I'm using the survey data, at the 10<sup>th</sup> and 25th percentiles, as a result it did not seem at all appropriate to me to look at differences across teams."<sup>21</sup>

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<sup>20</sup> Dennis Deposition (Rough) Transcript 132:4-133:6; 133:7-134:12.

<sup>21</sup> Kriegler Deposition (Rough) Transcript 83:23-84:11.



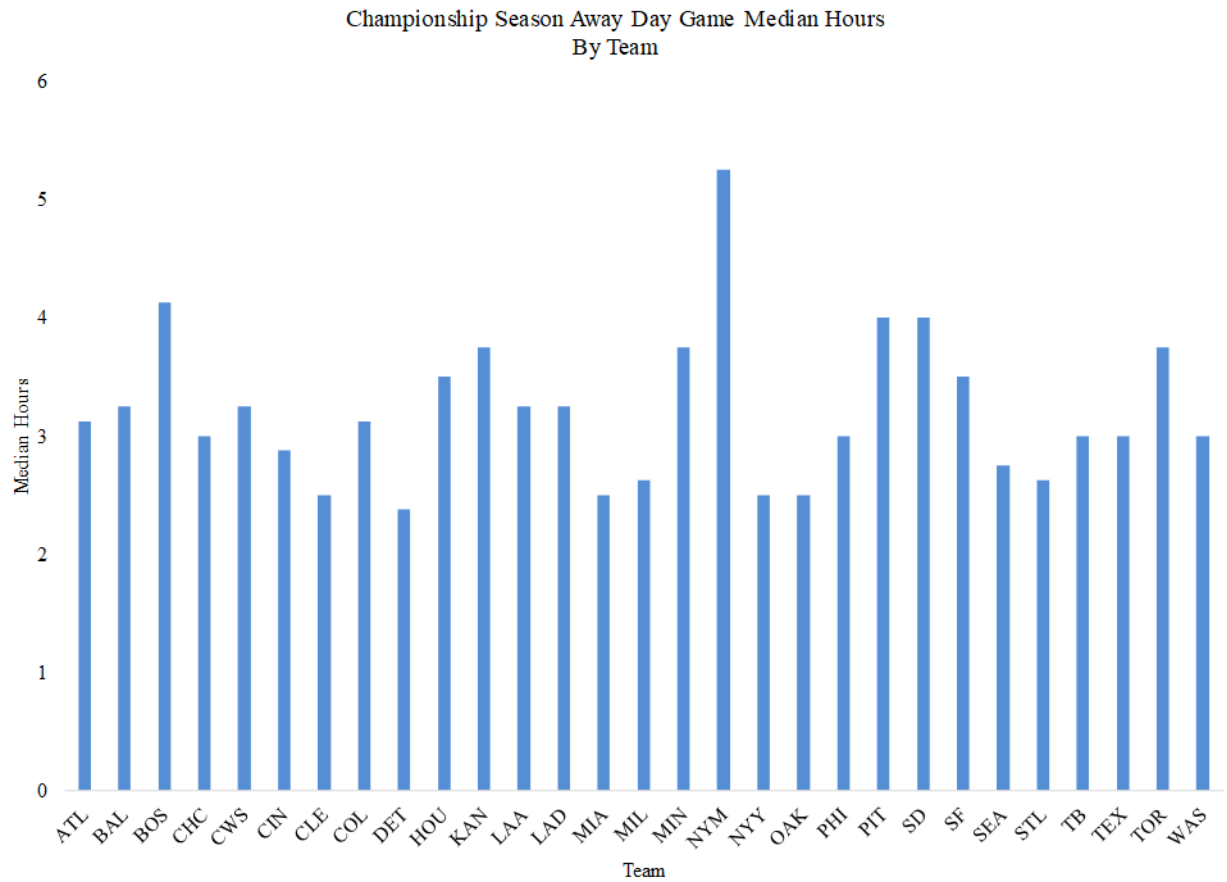
27. In their depositions, however, both Dr. Dennis and Dr. Kriegler acknowledged that they did not even attempt to measure what class members or the Named Plaintiffs were doing between the time they reported arriving at the stadium or facility and the time they reported departing.<sup>22</sup> As explained below, the combination of the unexplored variability in the survey responses in the Kriegler Subset, and the small number of respondents from each team/season—samples that Dr. Dennis concludes would not support a quantitative analysis—means that Dr. Kriegler has no basis to assert that his estimates of purported “Hours Worked” are representative or reliable for the classes and the Named Plaintiffs.

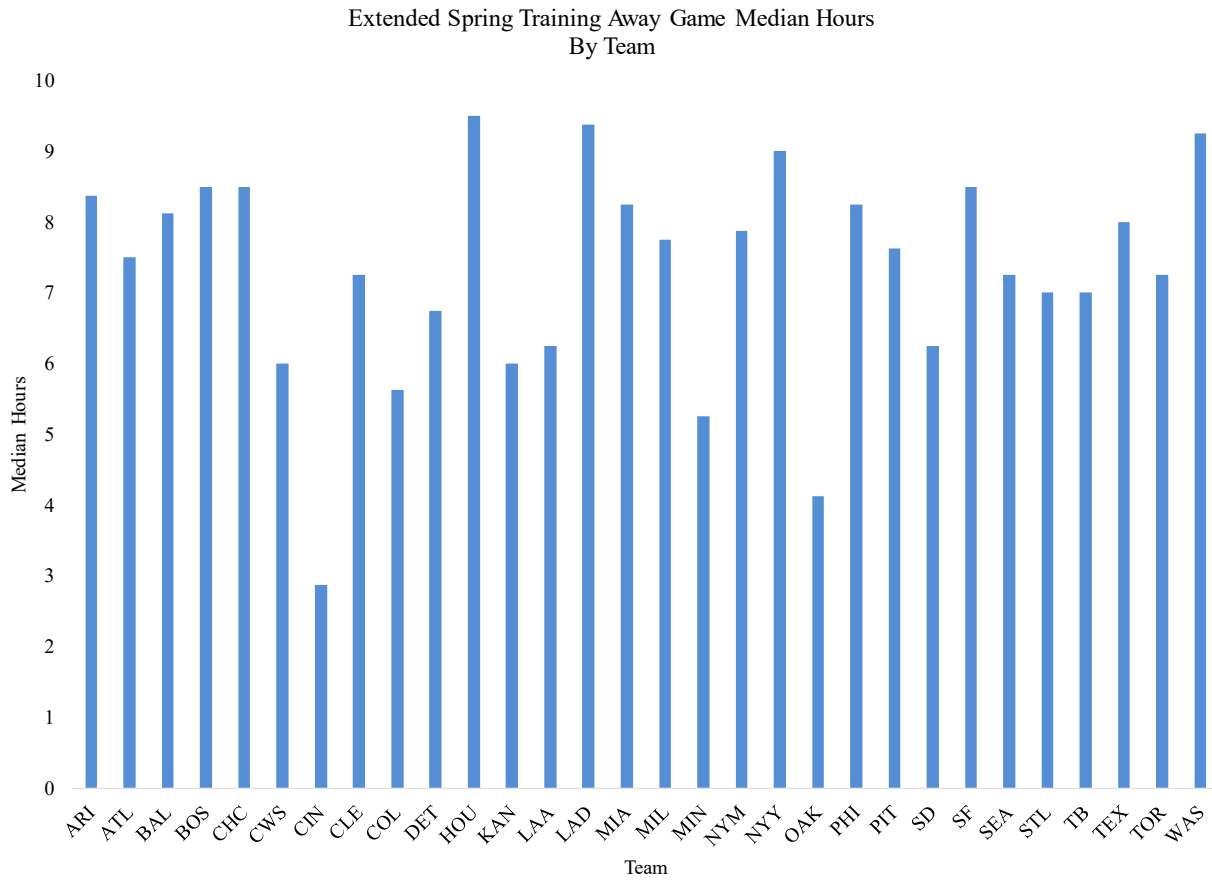
**A. Significant Variability in Purported “Hours Worked” Estimated Using the Krieger Subset Exists Both Across and Within Teams**

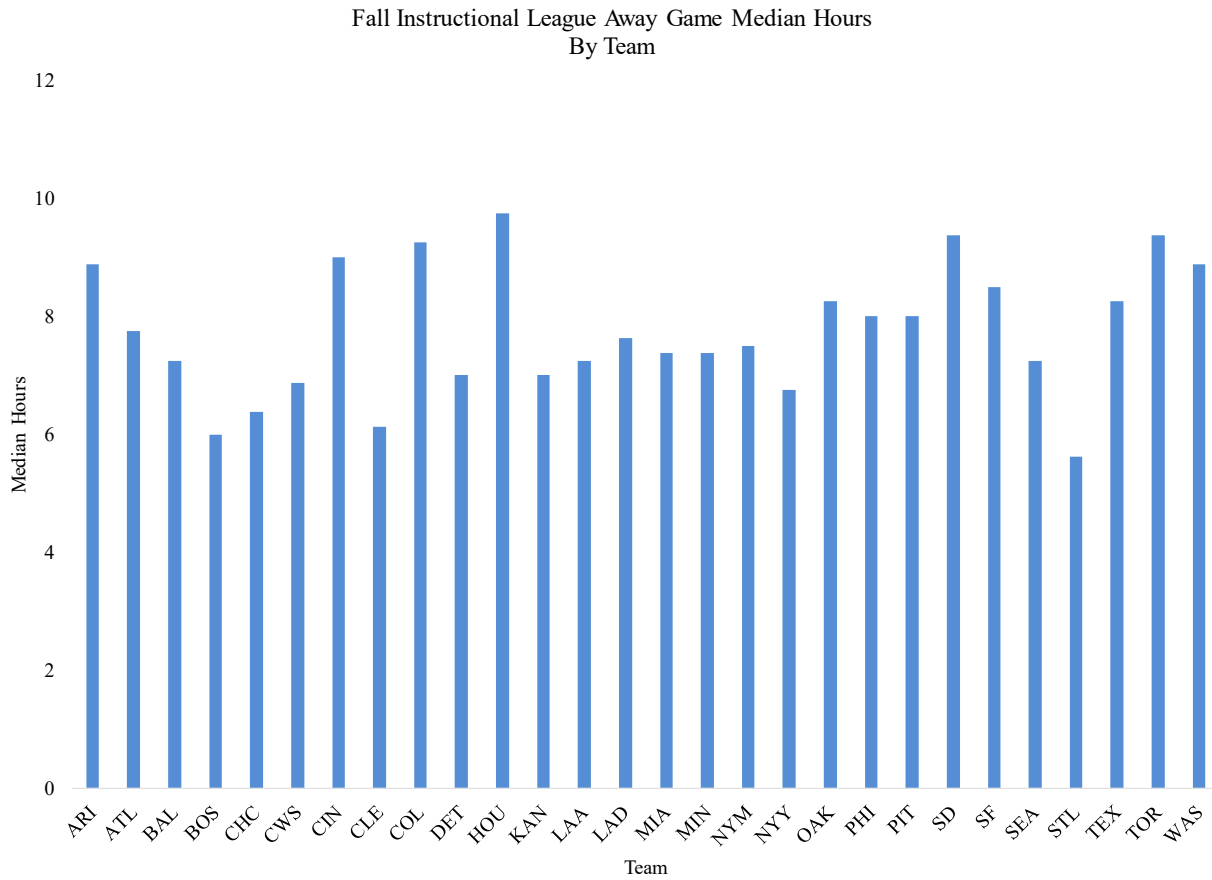
28. The responses in the Kriegler Subset demonstrate pronounced variability across teams. For example, the charts below show the median purported “Hours Worked” for each of the 30 teams for a few seasons/game types:

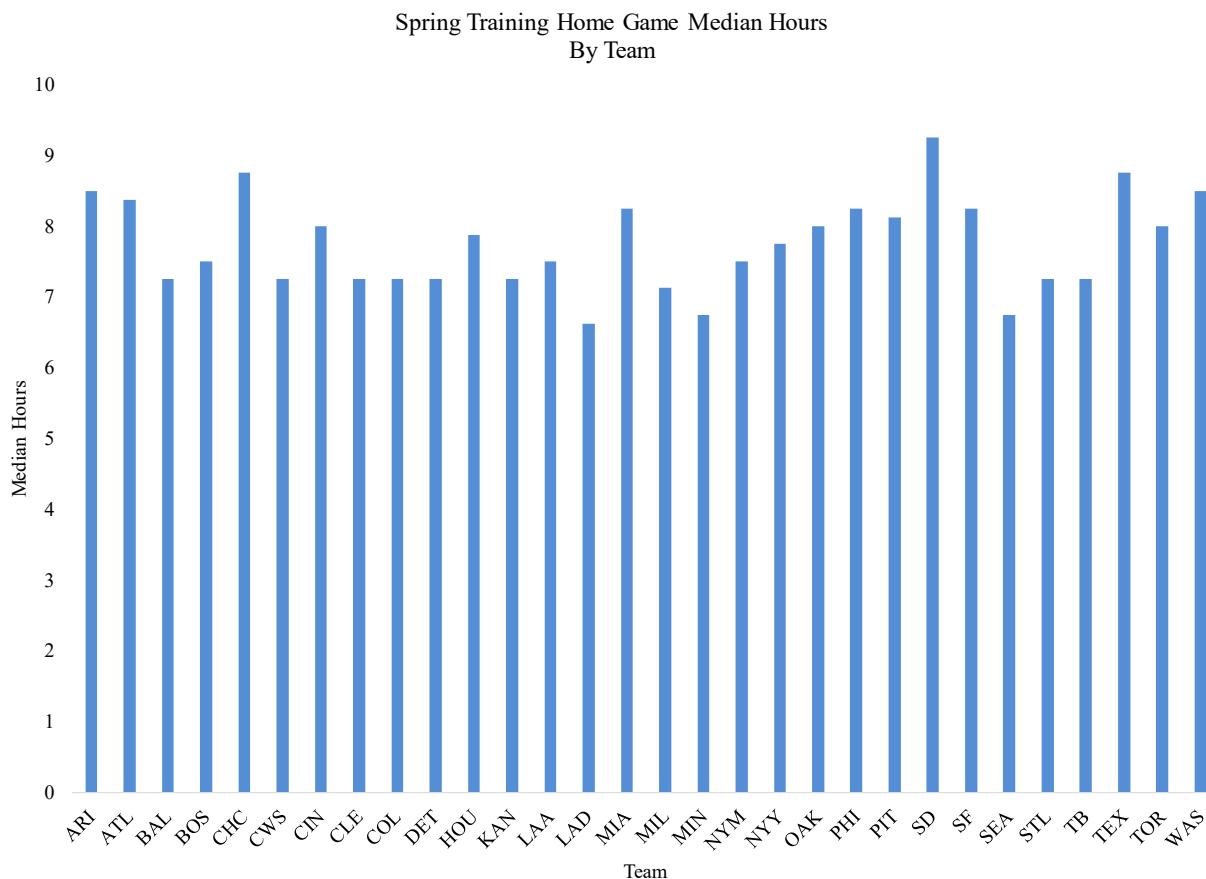
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<sup>22</sup> Dennis Deposition (Rough) Transcript 114:13-119:7. Kriegler Deposition (Rough) Transcript 64:14-65:17.

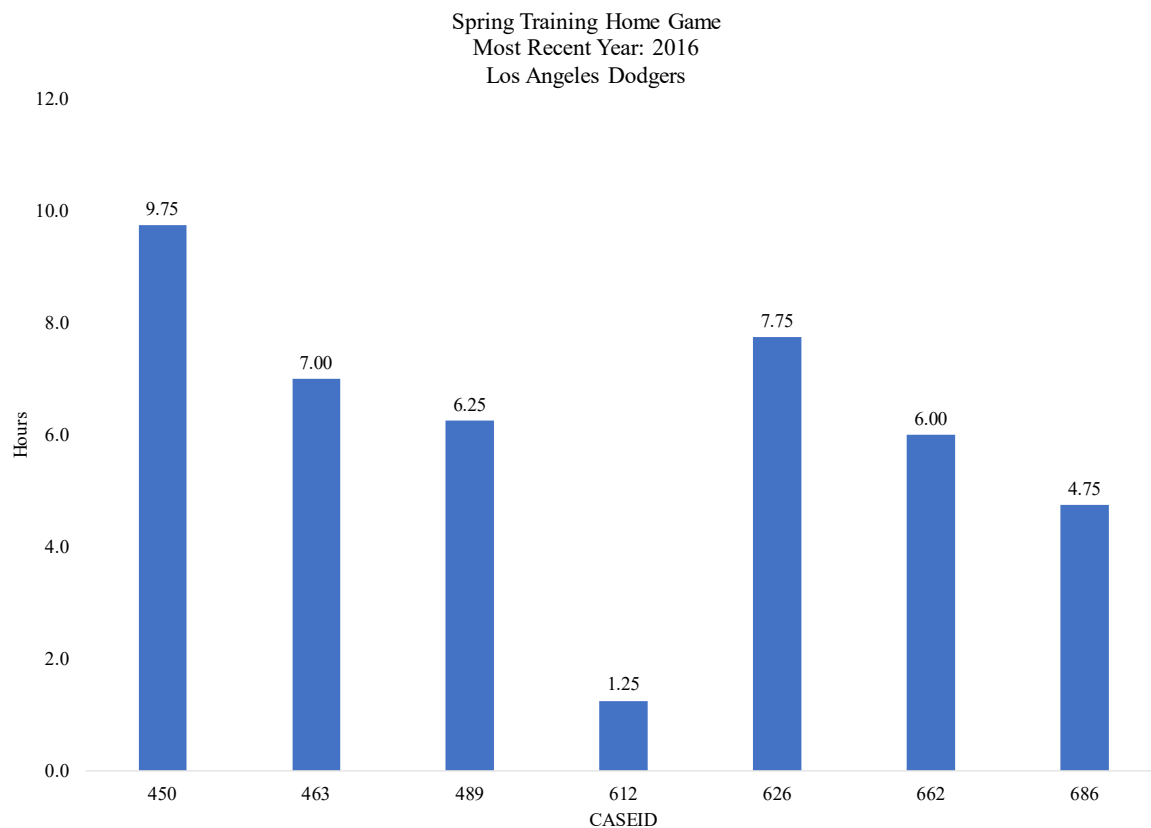


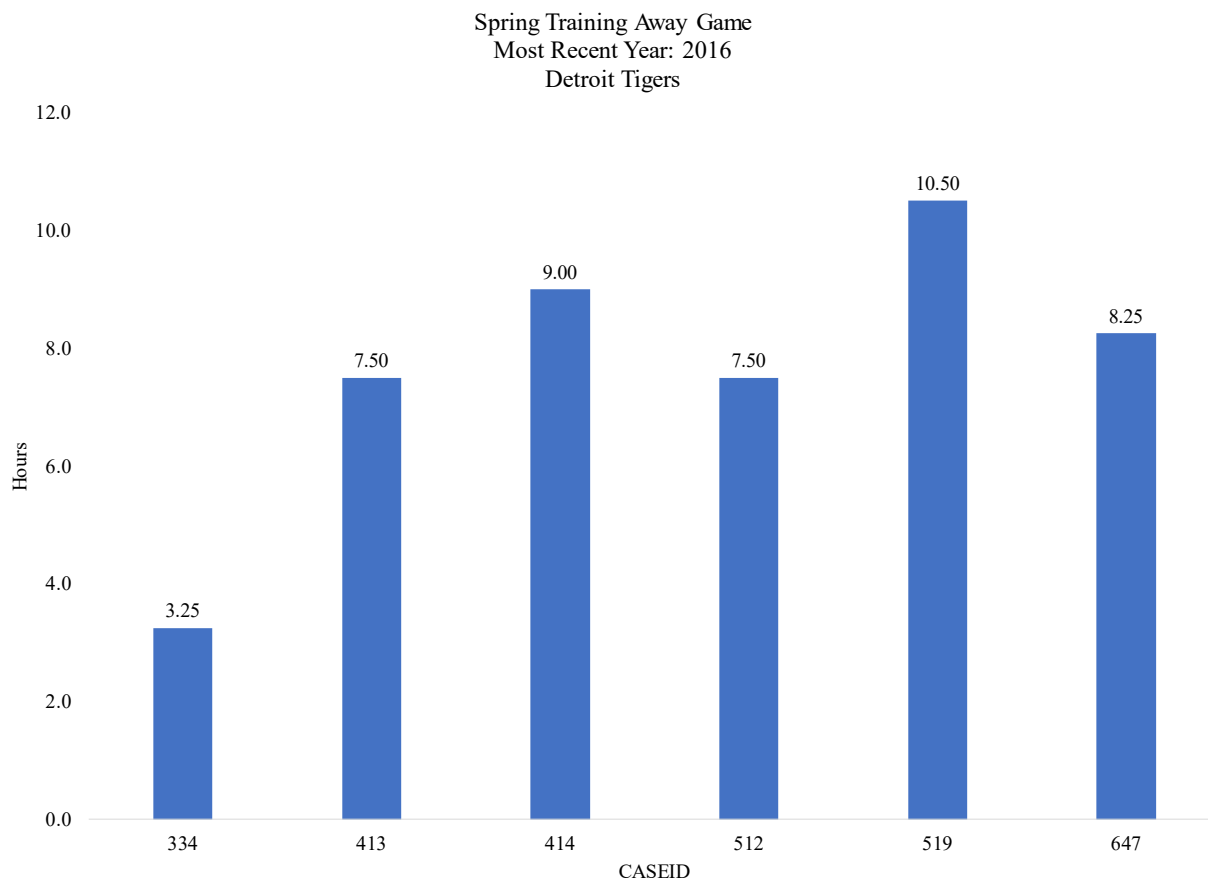






29. Moreover, variability is found for individual players on the same team on the same season. An example of this variability is reflected in the charts below, where each bar provides the data for an individual respondent:





30. These comparisons reveal that players on the same team in the same season may have differences as much as seven hours in reported “Pre-Game Hours Worked.” As explained in detail below in Section IV, the variability within and across teams is also present in the responses provided by respondents about their time in the Championship Season in 2015, both in and out of the California League.
31. As explained further below, Dr. Kriegler cannot know whether this variability occurred because: (i) the respondents on the same team played for different affiliates at different skill levels with different expectations about “Hours Worked”; (ii) the respondents differed in the amount of non-baseball activities or voluntary baseball-related activities they engaged in between their reported arrival and departure times at the facility/stadium; and/or (iii) the survey design was flawed. Moreover, while Dr. Kriegler asserts that he has controlled for this variability by using the 10<sup>th</sup> Percentile or 25<sup>th</sup> Percentile responses from the survey in his analysis, he merely masks these problems by throwing away 75%

or 90% of the survey responses from the Kriegler Subset. He still has no way to evaluate whether the purported “Hours Worked” estimated at these arbitrary points are reliable estimates of hours spent on team baseball-related activities across all classes and the Named Plaintiffs.

32. Furthermore, marked variability remains in the estimates of purported “Pre-Game Hours Worked” even amongst the 10<sup>th</sup> Percentile and the 25<sup>th</sup> Percentile across teams, as shown in the tables below:<sup>23,24</sup>

Season	Game Type	Team 1	10th Percentile	Team 2	10th Percentile
EXT	Away	Houston Astros	6.55	Minnesota Twins	1.10
FIL	Home	Colorado Rockies	5.50	New York Yankees	1.70
REG	Away Day	New York Mets	5.25	St. Louis Cardinals	1.6
ST	Home	New York Mets	4.75	Los Angeles Dodgers	0.95

Season	Game Type	Team 1	25th Percentile	Team 2	25th Percentile
EXT	Away	Houston Astros	6.63	Oakland Athletics	1.31
FIL	Home	Houston Astros	6.00	New York Yankees	2.00
REG	Away Day	New York Mets	5.25	St. Louis Cardinals	1.75
ST	Home	San Diego Padres	5.50	Seattle Mariners	2.69

### **B. The “Eyeball” Tests that Dr. Kriegler Offers as Evidence the Survey Results are Reliable Contain Errors and an Examination at the Team Level Negates Their Purported Validation**

33. The “validation” that Dr. Dennis performed compared purported “Hours Worked” estimated using the Main Survey to purported “Hours Worked” reflected in a few daily team itineraries for Spring Training, Extended Spring Training and in Instructional League and, for the Championship Season only, to testimony on purported “Hours Worked” from individuals he believed to be Rule 30(b)-6 witnesses, who were not. This

<sup>23</sup> The data we use in these examples are generated using the Kriegler Subset. Further variability is found in the data for the full set of respondents in Dr. Dennis’ Main Survey.

<sup>24</sup> As discussed below, Dr. Kriegler calculates “Pre-Game Hours Worked” for the Training Seasons as most often departure hour at end of day minus most often arrival hour at start of day minus hours reported for meals minus 2.75 hours assumed game time. For the Championship Season, he calculates it as start of game time minus most often arrival time at start of day minus time reported for meals minus game time.



testimony was the only source of purported “validation” for the Championship Season. According to his testimony, this “validation” was not performed at the team level.<sup>25</sup> That is, he did not compare estimates of purported “Hours Worked” from the survey for respondents from a given team to estimates using itineraries from that same team or testimony from players on that same team. Dr. Kriegler testified that to do so would be “an inappropriate comparison.”<sup>26</sup>

34. Dr. Kriegler offers two analyses in support of his assertion that the purported “Hours Worked” using the Kriegler Subset are reliable. Both analyses are badly flawed.

### **1. Dr. Kriegler’s First Purported Validation Contains Errors and Lacks Statistical Validity**

35. The first purported validation is found in Exhibit 8 to his report. In that exhibit, he compares “Pre-Game Hours Worked” estimated using the 10<sup>th</sup> Percentile (25<sup>th</sup> Percentile) of his subset of survey respondents to those estimated from the average “Earliest Start Time” (“Latest Start Time”) from his sample of itineraries and finds a resemblance. He conducts no statistical tests but asserts that the visual similarity is support for the survey being reliable.

#### ***a. Dr. Kriegler has to ignore most responses to get even a visual similarity between estimates of purported “Pre-Game Hours Worked” from the survey and the itineraries***

36. Dr. Kriegler testified that, “given the way that I’m using the survey data, at the 10<sup>th</sup> and 25<sup>th</sup> percentiles, as a result it did not seem at all appropriate to me to look at differences across teams.”<sup>27</sup>
37. The very fact that Dr. Kriegler has to ignore the top 75% or 90% of responses to get even a visual similarity between the survey and the itineraries is telling. The graph below compares the median “Pre-Game Hours Worked” for each team during the Championship

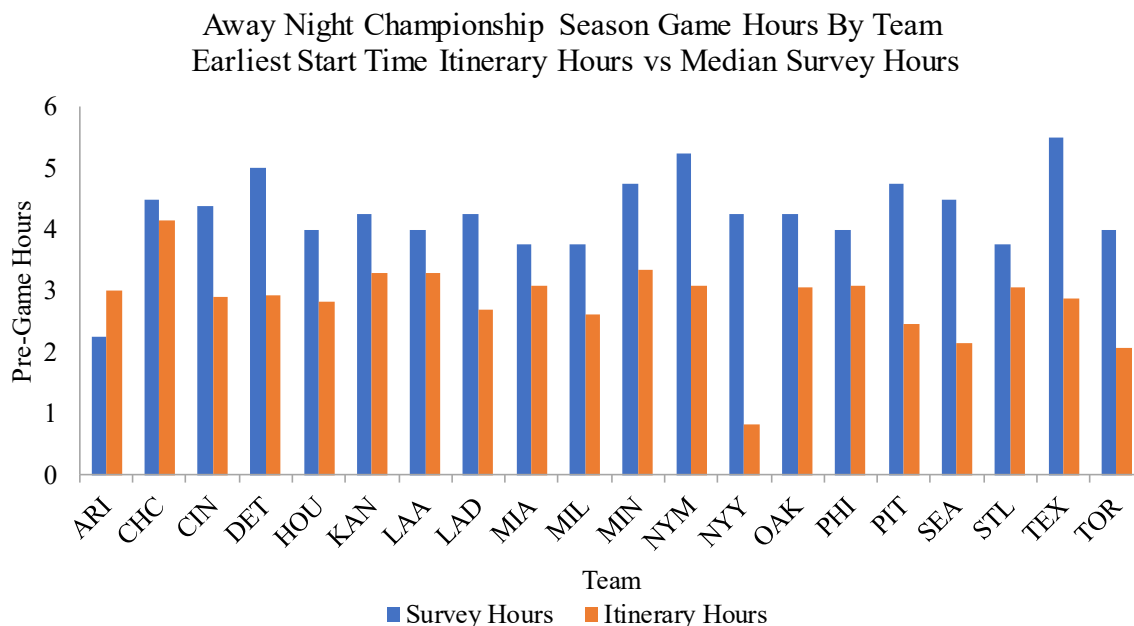
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<sup>25</sup> Dennis Deposition (Rough) Transcript 221:20-223:8.

<sup>26</sup> Kriegler Deposition (Rough) Transcript 90:4-6.

<sup>27</sup> Kriegler Deposition (Rough) Transcript 84:7-11.

Season Away games to “Pre-Game Hours Worked” estimated using the survey responses from the Kriegler Subset to those estimated using the Earliest Start Time from the sampled itineraries.



38. As shown above, the purported “Pre-Game Hours Worked” by team estimated using the median respondent in the Kriegler Subset are almost always higher than the purported “Pre-Game Hours Worked” estimated using the median daily itinerary for the same team, with some differences in excess of four hours. Dr. Kriegler simply ignores and masks this problem by moving to the 10<sup>th</sup> and 25<sup>th</sup> Percentiles. That is, he has to ignore the responses given by 75% to 90% of the respondents in the Kriegler Subset to even generate some visual similarity between the purported “Hours Worked” estimated using the survey responses for the Kriegler Subset and estimated using the sampled itineraries.

***b. Dr. Kriegler's estimates of purported "Pre-Game Hours Worked" from the survey and the "validation" from the itineraries contain errors, rendering his comparison unreliable***

39. In attempting to replicate Dr. Kriegler's analysis, we discovered errors in both his calculation of purported "Pre-Game Hours Worked" from the survey and also in his determination of the average Earliest Start Time and Latest Start Time from the itineraries.
40. First, Dr. Kriegler's formula for "Pre-Game Hours Worked" from the responses given by survey respondents during the Training Seasons is:

$$\begin{aligned}
 & \text{Reported "Most Often Departure Time from Stadium"} \\
 & \text{— Reported "Most Often Arrival Time at Stadium"} \\
 & \text{— Reported Meal Time} \\
 & \text{— 2.75 Hours for Assumed Game Time} \\
 & \hline
 & = \text{Purported "Pre – Game Hours Worked"}
 \end{aligned}$$

41. As a result of this formulaic approach, then, any post-game time is necessarily included in his estimate. His 10<sup>th</sup> Percentile and 25<sup>th</sup> Percentile "Pre-Game Hours Worked" in Exhibit 8 are therefore necessarily an overestimate, but to an unknowable degree.
42. Second, errors are found in Dr. Kriegler's coding of the Earliest Start Time and Latest Start Time from 1191 daily itineraries. According to his deposition testimony, he provided no written protocol explaining how coders were supposed to retrieve this information. Investigation indicates that the failure to create such a protocol led to inconsistencies in the times being captured by the coders. While Dr. Kriegler testified that the coders were instructed to exclude lunch from their recording of the activity used for the "Earliest Start Time," he acknowledged when taken through an example that they

might have unintentionally captured lunch.<sup>28</sup> In fact, a review of the data shows that some coders included the time slated for lunch, while others did not.

43.

44.

45. Dr. Kriegler's attempt to validate his use of the survey responses in the Kriegler Subset using comparisons to the sampled itineraries, then, is based on erroneous data for both pieces of the comparison. Given these errors, Dr. Kriegler can provide no assurance that, were these errors corrected, even his eyeball test would show a similarity between the purported "Pre-Game Hours Worked" estimated using the survey responses for the Kriegler Subset and the estimates from using the sampled itineraries. His comparison is necessarily unreliable, offering no validation of the survey.

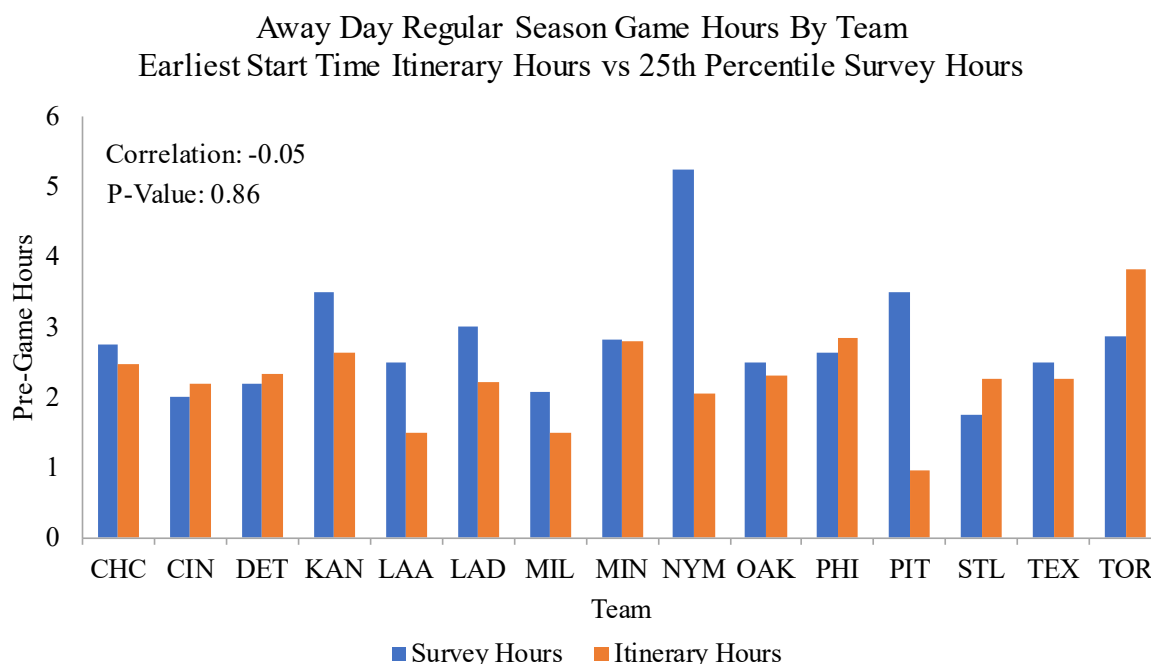
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<sup>28</sup> Kriegler Deposition (Rough) Transcript 103:10-104:9, 104:19-23, 105:1-9, 190:1-192:18.

<sup>29</sup> CHC0018587.xlsx

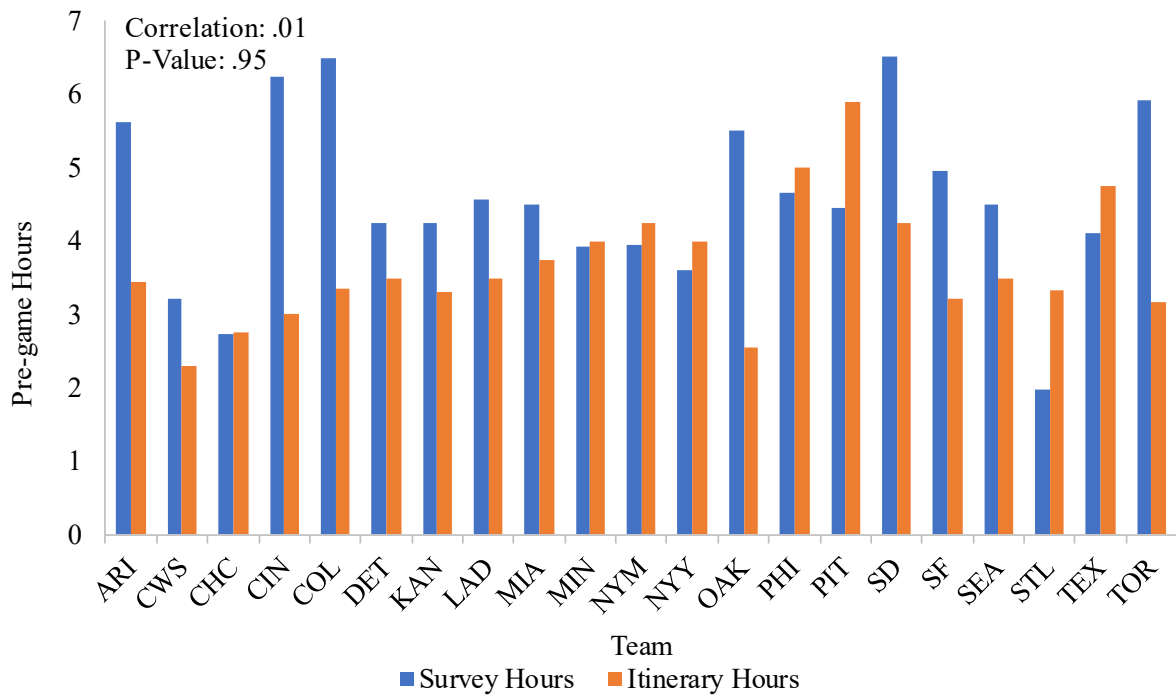
***c. Proper comparison at the team level demonstrates that no correlation exists between the Pre-Game Hours Worked” estimated using the survey and the itineraries***

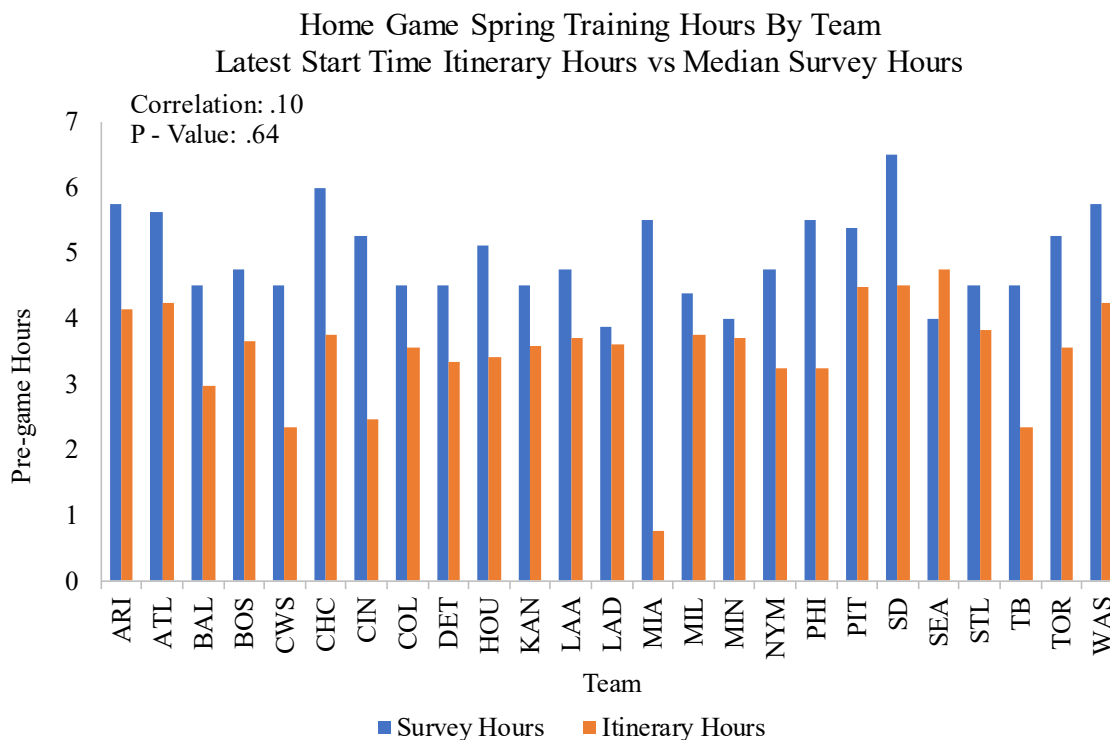
46. This variability indicates that the proper comparison to assess the validity of the survey would have been conducted by team. We conducted these tests at the team level and, calculating Pearson correlation coefficients, find no statistically significant correlations for any of the hours estimated.<sup>30</sup> Several examples are below. The measured correlation coefficients are included on the charts, with the associated p-values:



<sup>30</sup> See Exhibits C1-D2 for the full set of comparisons. A Pearson correlation coefficient is a statistical measure of the degree to which two variables move together (or “covary”). A correlation coefficient of 1 (or -1) indicates the two variables move in lockstep (e.g., when one variable moves up by 1, the other always moves up (or down) by 0.5). A correlation coefficient of 0 indicates the two variables do not move together at all. Given the variability in the data and the sample size, a p-value can be calculated, indicating whether the measured relationship is statistically significant (i.e., whether we can, on the basis of the correlation coefficient we observe, reject the null hypothesis that that is no correlation between the two variables.) It is only if the calculated p-value is less than 0.10 or 0.05 that we can reject the null hypothesis of no correlation. As shown above and in Exhibits C1-D2, the p-values for the correlations between the purported “Pre-Game Hours Worked” estimated using the survey responses from the Kriegler Subset and estimated using the sample of itineraries are far in excess of these levels, indicating no correlation is present.

Away Game Instructional League Hours By Team  
 Latest Start Time Itinerary Hours vs 10th Percentile Survey Hours





47. These tests show that the correlations at the team level between purported “Hours Worked” using the responses from the Kriegler Subset and the sampled itineraries is virtually zero across all seasons and game types. The correlations are not remotely significant. This lack of correlation means that this comparison generates no support for the reliability of the survey.

## **2. Dr. Kriegler’s Second Purported Validation Masks Variability in the Data and Statistical Analysis Shows It Is Unsupported**

48. Dr. Kriegler’s second purported validation is found comparing data from the survey to testimony given by the Named Plaintiffs in deposition or declarations.<sup>31</sup> Here, Dr.

<sup>31</sup> While Dr. Kriegler does not include testimony from Defendants’ witnesses on the list of Representative Evidence that he uses to estimate alleged damages, he does include selected testimony in Exhibits 10a-d of the Kriegler Supplemental Report. This testimony fails to include testimony by these same witnesses that, *e.g.*, time spent at the facility included non-baseball related activities (*e.g.*, playing cards, watching TV, listening to headphones) and/or voluntarily engaged in individual baseball-related training. See, *e.g.*, Frank Viola Deposition Transcript 134:1-25; Jim Rantz Deposition Transcript 157:4-10; 158: 23-159:1; Bobby Scales Deposition Transcript 97:12-16.

Kriegler makes sweeping generalizations that again mask the marked variability in survey responses across individuals and across teams. And, once again, he conducts no statistical tests of the purported similarity.

49. We conducted a series of statistical tests and found that, for most season/game type combinations, there is also no statistically significant correlation between the average “Hours Worked” by team estimated using the Kriegler Subset and the average testimony provided by Named Plaintiffs from the same team. See Exhibits E1-E2.

50. The one actual comparison that Dr. Kriegler provides is to assert that the 10<sup>th</sup> and 25<sup>th</sup> Percentile for Championship Season Home Night games from the Kriegler Subset generates approximately the same range of arrival times as the range in the testimony of the Named Plaintiffs. Once again, however, conducting an investigation of the underlying data at the team level reveals variability that belies his comparison. For example:

- a. The 10<sup>th</sup> Percentile of “Pre-Game Hours Worked” for Championship Season Home Night games for the Washington Nationals differs from the hours testified by Named Plaintiffs who played for the Washington Nationals by over 3.5 hours.<sup>32</sup>
- b. The 25<sup>th</sup> Percentile of “Pre-Game Hours Worked” for Championship Season Home Night games for the Milwaukee Brewers differs from the hours testified by Named Plaintiffs who played for the Milwaukee Brewers by 2.75 hours.<sup>33</sup>

51. In summary then, the purported validation tests conducted by Dr. Kriegler are both badly flawed and are not conducted at the team level. Were the flaws corrected, it is not clear whether the comparison would even pass his “eyeball test.” Conducted at the appropriate level—the team level—there is no correlation between the purported “Pre-Game Hours Worked” estimated using the survey responses in the Kriegler Subset and those he estimated using the sampled itineraries or from testimony by Named Plaintiffs. The proper analysis provides no support for Dr. Kriegler’s assertion that the survey results are reliable.

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<sup>32</sup> See Exhibit F.

<sup>33</sup> See Exhibit F.



### **C. Neither Dr. Dennis nor Dr. Kriegler Calculated Any Standard Errors or Confidence Intervals Around the Estimates of Purported “Hours Worked”**

52. Particularly in situations showing pronounced variability, it is customary in academics and generally required for litigation data based on samples—especially when the data are collected through a survey—to calculate and report standard errors and/or confidence intervals around estimates.<sup>34</sup> Neither Dr. Dennis nor Dr. Kriegler calculated these bands around their estimates of purported “Hours Worked.”
53. Dr. Kriegler’s failure to calculate standard errors or confidence intervals around the estimates of purported “Hours Worked” from the survey responses in the Kriegler Subset is particularly problematic because his analysis relies on small samples. Given that the sample sizes are small and there is observed variability in the “hours worked” reported by the individual respondents, any aggregate estimates calculated using the survey data—including the 10<sup>th</sup> and 25<sup>th</sup> Percentiles—will have some level of uncertainty around them. Standard errors and confidence intervals need to be calculated and reported to understand just how large that band of uncertainty around the estimates is.<sup>35</sup>
54. To illustrate the point, let us assume that Dr. Kriegler’s estimate of the 10<sup>th</sup> Percentile for purported “Hours Worked” at Spring Training Away Games is 6.0 hours. This is just the estimate calculated for the sample of respondents in the Kriegler Subset who answered questions about Spring Training, and it may or may not be close to the actual hours worked for the entire population of players who participated in Spring Training Away games. If the standard error is small, then the confidence interval will be narrow, and we can conclude that the true population value is close to 6.0. However, if the standard error is large, the confidence interval will be wide, and we will not be able to conclude that the population value is close to 6.0. The small sizes of many of his samples, particularly at the team/season level, increase the likelihoods that his standard errors will be large and his confidence intervals wide. In short, when Dr. Kriegler reported his estimates without

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<sup>34</sup> See David H. Kaye and David A. Freedman (2011), “Reference Guide on Statistics” in *Reference Manual on Scientific Evidence*, 3<sup>rd</sup> Edition, pp. 243-246 and Shari Seidman Diamond (2011), “Reference Guide on Survey Research,” in *Reference Manual on Scientific Evidence*, 3<sup>rd</sup> Edition, pp. 415-416.

<sup>35</sup> See Leslie Kish (1964), *Survey Sampling*, New York: John Wiley & Sons, pp. 23-25.

standard errors or confidence intervals, his analysis was incomplete and cannot be relied upon.

55. Dr. Kriegler testified that he did not need to conduct margin of error calculations in connection with his estimates because “[t]hey’re percentiles.”<sup>36</sup>

“Margin of error calculations generally are reserved for - - generally pertain to averages, population averages or population totals, or population percentages. I don’t - - in all of my years as a professional statistician I can’t recall a time that - - of computing a margin of error on a percentile, particularly a low - - particularly low percentile.”<sup>37</sup>

56. Dr. Kriegler’s fails to acknowledge that calculating standard errors in such circumstances is important and customary. His assertion that calculating standard errors around percentiles is not needed, particularly given available techniques, is inconsistent with his own publications. Indeed, he published an article explaining how to use the relevant statistical method for this situation, the bootstrap procedure.<sup>38</sup> At his deposition, however, he stated that he “had never seen” the bootstrap method used to calculate a standard error and confidence interval for a percentile.<sup>39</sup> Despite Dr. Kriegler’s assertion, there is ample demonstration of the use of the bootstrap to calculate these quantities, included in the sources he relied upon in his own published article.<sup>40</sup> The fact that Dr. Kriegler has not calculated standard errors here means it is not possible to know the range of uncertainty around his estimates, rendering them unreliable.

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<sup>36</sup> Kriegler Deposition (Rough) Transcript 176:3.

<sup>37</sup> Kriegler Deposition (Rough) Transcript 176:7-16.

<sup>38</sup> Kriegler, Brian. “Practitioner’s Guide to Statistical Sampling; Part 2: Resampling and Bootstrapping: A Method for Determining Confidence Intervals from Small Datasets” *Law360* (Jan 8-11, 2018).

<sup>39</sup> Kriegler Deposition (Rough) Transcript 176: 21-22

<sup>40</sup> See Bradley Efron and Robert J. Tibshirani (1993), *An Introduction to the Bootstrap*, New York: Chapman & Hall, especially pp. 12-16 and 168-174. Use of the bootstrap for a percentile is also available in Stata, a widely used statistical analysis software package.

## **VI. Given the Pronounced Variability in Survey Responses and Small Samples in the Kriegler Subset, Dr. Kriegler Can Offer No Assurance His Results are Representative of the Relevant Populations**

57. Dr. Kriegler's use of the Kriegler Subset introduced small sample problems that compound the unreliability of his results. As noted, he limited his analysis to the subset of respondents to the Main Survey who played during the 2015 or 2016 seasons and had not opted into the FLSA Collective.<sup>41</sup> Below, the number of respondents by team by season in the Kriegler Subset are presented:

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<sup>41</sup> In his Supplemental Declaration, Dr. Kriegler mistakenly states this number as 245.

**Number of Respondents Who Provided Arrival, Departure, and Meal-Time  
Survey Answers By Team and Season**

<b>Teams</b>	<b>ST</b>	<b>EXT</b>	<b>REG</b>	<b>FIL</b>
Arizona Diamondbacks	5	2	1	2
Atlanta Braves	6	1	6	2
Baltimore Orioles	7	2	3	1
Boston Red Sox	7	1	5	4
Chicago Cubs	7	6	5	2
Chicago White Sox	9	5	6	2
Cincinnati Reds	8	2	6	1
Cleveland Indians	9	3	7	4
Colorado Rockies	6	4	4	1
Detroit Tigers	7	2	3	1
Houston Astros	8	2	5	2
Kansas City Royals	5	1	4	1
Los Angeles Angels	12	3	12	3
Los Angeles Dodgers	8	2	7	2
Miami Marlins	9	5	6	4
Milwaukee Brewers	9	3	7	0
Minnesota Twins	8	4	4	2
New York Mets	3	2	1	3
New York Yankees	10	8	6	2
Oakland Athletics	6	2	5	1
Philadelphia Phillies	9	5	6	2
Pittsburgh Pirates	8	4	4	3
San Diego Padres	5	3	1	2
San Francisco Giants	9	3	3	2
Seattle Mariners	8	1	5	1
St. Louis Cardinals	12	5	8	2
Tampa Bay Rays	6	3	3	0
Texas Rangers	13	2	9	3
Toronto Blue Jays	9	3	7	2
Washington Nationals	4	3	5	2
<b>Total</b>	<b>232</b>	<b>92</b>	<b>148</b>	<b>59</b>

58. Dr. Dennis testified in his deposition that, in his opinion, reliable statistical estimates could only be generated with at least 25 responses.<sup>42</sup> The number of respondents by team

<sup>42</sup> Dennis Deposition (Rough) Transcript 132:15-133:17.

and season in the Kriegler Subset ranges from 0 to 13. Even smaller samples exist by team, season and type of game.<sup>43</sup> Were the data to be examined at the affiliate level (which Dr. Dennis did not collect in the survey), it would be fewer still.

59. As noted above, the pronounced variability may result because of differences in expectations of attendance by team and Club level; individualized, voluntary behavior; or poor survey design. Even assuming for the sake of argument only that the estimates reflect actual variability in “Hours Worked” due to differences in expectations by team and Club level, for Dr. Kriegler’s aggregate estimates of purported “Hours Worked” to be representative of the relevant populations (the Florida, Arizona and California classes, the FLSA collective and the Named Plaintiffs), he needs a representative sample of responses within and across teams. However, given the small samples of responses from each team in the Kriegler Subset, he is unable to provide an assurance that his estimates of purported “Hours Worked” capture the underlying variability. As such, he can offer no assurance that his estimates are representative of the classes, the FLSA collective, or the Named Plaintiffs.
60. Importantly, given the variability at the team level, Dr. Kriegler should be using only the data for California League respondents to generate his estimates of purported “Hours Worked” during the Championship Season. It is only by doing so that he could ensure that the data is representative of the population to which he is applying it. However, as noted above, he has no assurance the California League respondents are even responding about their time in the California League. Moreover, the subset of survey data on which he relies includes only nine or 10 respondents (depending on the question) who were even potentially providing answers about their time in the California League during 2015 season because eight also played for other affiliates during 2015 and so may have been

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<sup>43</sup> Even within a season, the number of respondents who answered each question relied upon by Dr. Kriegler varied such that none of his purported “Hours Worked” estimates are based on the full set of respondents. For example, his Spring Training “Hours Worked” estimates are each based on 228 respondents, his Extended Spring Training estimates are based on sample sizes ranging from 90 to 92, his Championship Season estimates are based on sample sizes ranging from 143 to 154, and his Fall Instructional League estimates are each based on 58 respondents. The same is true at the team level. For example, while 13 players who played for the Rangers in 2015 and 2016 responded to at least one question about Spring Training, only 11 responded to questions about all types of days – one respondent did not respond to the question about non-game-days and another respondent did not respond to either of the questions about game days.

responding about their non-California League experience in that year. As shown below, a good deal of variability is reflected even amongst the responses provided by the 10 participants from the Kriegler subset who participated in the California League in 2015.

Case ID	Year	Major League Club	Away Day Game	Away Night Game	Home Day Game	Home Night Game
			"Hours Worked"	"Hours Worked"	"Hours Worked"	"Hours Worked"
401	2015	Colorado Rockies	3.25	4.25	2.75	4.75
547	2015	Houston Astros	3.00	3.25	3.25	4.00
571	2015	Los Angeles Angels of Anaheim	4.75	6.75	5.00	7.00
593	2015	Los Angeles Angels of Anaheim	incomplete data	incomplete data	3.00	5.00
704	2015	Los Angeles Angels of Anaheim	2.50	4.00	3.00	6.00
450	2015	Los Angeles Dodgers	3.75	4.25	4.50	6.25
585	2015	Los Angeles Dodgers	3.25	4.75	3.00	5.50
662	2015	Los Angeles Dodgers	2.00	4.00	1.75	5.00
702	2015	Los Angeles Dodgers	2.75	4.00	2.75	5.50
425	2015	Texas Rangers	2.75	3.75	4.25	6.25

61. Variability amongst the responses provided by survey participants from the same team is not limited to the California League. Similar variability is found for respondents on the same team during the Championship Season outside the California League.

Case ID	Year	Major League Club	"Hours Worked"
			Night Away Games
481	2015	Chicago Cubs	1.50
321	2015	Chicago Cubs	3.00
590	2015	Chicago Cubs	4.50
635	2015	Chicago Cubs	5.00
514	2015	Chicago Cubs	5.75
602	2015	Miami Marlins	3.25
557	2015	Miami Marlins	3.50
715	2015	Miami Marlins	3.50
629	2015	Miami Marlins	4.00
669	2015	Miami Marlins	4.75
663	2015	Miami Marlins	5.25

<u>Case ID</u>	<u>Year</u>	<u>Major League Club</u>	<u>"Hours Worked" Day Home Games</u>
541	2015	Cincinnati Reds	1.75
483	2015	Cincinnati Reds	2.25
597	2015	Cincinnati Reds	2.75
687	2015	Cincinnati Reds	3.25
603	2015	Cincinnati Reds	3.75
418	2015	Cincinnati Reds	4.50
441	2015	Milwaukee Brewers	1.50
691	2015	Milwaukee Brewers	2.00
474	2015	Milwaukee Brewers	2.50
381	2015	Milwaukee Brewers	3.25
529	2015	Milwaukee Brewers	3.75
599	2015	Milwaukee Brewers	3.75

62. While Dr. Kriegler testified that he had no reason to believe the California League was different, as noted above, he cannot know whether this variability occurred because: (i) the respondents on the same team played for different affiliates at different Club levels with different expectations about “Hours Worked”; (ii) the respondents differed in the amount of non-baseball activities or voluntary baseball-related activities they engaged in between their reported arrival and departure times at the facility/stadium; and/or (iii) the survey design was flawed. As noted, while Dr. Kriegler asserts that he has controlled for this variability by using the 10<sup>th</sup> Percentile or 25<sup>th</sup> Percentile responses from the Kriegler Subset in his analysis, he merely masks these problems by throwing away 75% or 90% of the survey responses. He still has no way to evaluate whether the purported “Hours Worked” estimated at these arbitrary points are reliable estimates of hours spent on team baseball-related activities across all classes and the Named Plaintiffs.
63. Whatever the source of the variability in survey responses within and across teams, a reliable estimate of any “Hours Worked” in the California League during the 2010-2019 Championship Seasons cannot be estimated using responses from nine or 10 players about their experience during 2015, an experience that may not even be about their time in the California League.

## **VII. The Kriegler Subset Has Additional Flaws that Render Its Results Additionally Unreliable**

### **A. Professor Ericksen Identified Fundamental Flaws with the Main Survey**

64. Professor Ericksen reviewed the design and results of Dr. Dennis' Main Survey and concluded that "Dr. Dennis has not provided reliable estimates of the 'hours worked' by minor leaguers or a reliable methodology for calculating the same."<sup>44</sup> In particular, he explained that the survey questions Dr. Dennis used to measure various arrival, departure, and eating times for various activities required burdensome calculations by respondents spanning back as much as four or five years into their memories.<sup>45</sup> For example, in asking respondents "the time that you would often arrive at your team's Spring training complex" on game days, respondents would need to "remember the arrival times for each of those days, create the distribution of arrival times across the seven categories and then identify which category had the most entries."<sup>46</sup> Further, Dr. Dennis' survey had respondents answer up to 65 questions.<sup>47</sup> As Professor Ericksen explained, when a survey asks respondents to put in an undesirable amount of effort to answer questions, respondents "satisfice."<sup>48</sup> This is when respondents skip cognitive steps like fully interpreting the question or searching their memories and provide what they believe is a merely satisfactory response that sounds reasonable to them. However, a "satisfactory" response is not necessarily an accurate one.
65. Professor Ericksen also explained that not all minor league baseball players had equal investment in the outcome of the survey.<sup>49</sup> In fact, he found that "the main survey response rate for opt-in class members was higher than the response rate for those who

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<sup>44</sup> Ericksen September 2016 Declaration, ¶ 56; Ericksen October 2016 Declaration ¶¶ 3-4, 24, 29.

<sup>45</sup> Ericksen September 2016 Declaration, ¶¶ 19-22; Ericksen October 2016 Declaration ¶¶ 18-24.

<sup>46</sup> Ericksen September 2016 Declaration, ¶¶ 20, 22.

<sup>47</sup> Ericksen September 2016 Declaration, ¶ 4.

<sup>48</sup> Ericksen October 2016 Declaration ¶¶ 24-29.

<sup>49</sup> Ericksen October 2016 Declaration ¶¶ 6.



did not opt-in.”<sup>50</sup> Respondents aware of the lawsuit may have been motivated to upwardly bias their work time estimates. And, self-interest bias aside, Professor Ericksen noted that Dr. Dennis’ non-response analysis was limited, comparing survey respondents to non-survey respondents on three variables for which he did not justify his selection (age, fielding position, and most recent year played).<sup>51</sup> As such, Professor Ericksen concluded that Dr. Dennis did not adequately address the issue of non-response bias.<sup>52</sup>

66. I agree with Professor Ericksen’s conclusions and, in particular, note that Dr. Kriegler’s reliance on a subset of non opt-in respondents from 2015 and 2016 does not solve the issues of self-interest bias and recall bias discussed in Professor Ericksen’s declarations. With respect to self-interest bias, non opt-in players are still part of the class and thus have an interest in the outcome of the survey and lawsuit.<sup>53</sup> Given that Dr. Dennis’ pilot survey was conducted shortly before the 2016 Spring Training season and the pilot survey informed respondents that the survey was related to the litigation, it is reasonable to be concerned that some players who were invited to complete the Main Survey and had recently attended Spring Training may have been aware of the purpose of the survey as a result of conversations with other players.<sup>54</sup> Because the Main Survey did not ask any questions that could be used to ascertain whether the respondents had any awareness of the purpose of the survey, Dr. Dennis—and therefore Dr. Kriegler—have no way of assessing whether focusing on non opt-in respondents addresses the issue of self-interest bias.

67. With respect to recall bias, the memories of even those players who participated in activities in 2015 or 2016 would be strained by Dr. Dennis’ survey questions. For example, because the survey was conducted in the midst of the 2016 Championship

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<sup>50</sup> Ericksen September 2016 Declaration, ¶ 47.

<sup>51</sup> Ericksen September 2016 Declaration, ¶¶ 44-48.

<sup>52</sup> Ericksen October 2016 Declaration ¶¶ 9.

<sup>53</sup> Ericksen September 2016 Declaration, ¶¶ 14, 40; Ericksen October 2016 Declaration, ¶¶ 8-10.

<sup>54</sup> While Dr. Dennis testified that he had not invited the Named Plaintiffs to participate in the Main Survey, a review of respondents shows this testimony is inaccurate. Twenty of the 45 Named Plaintiffs are included in the list of players invited to the survey that Dr. Dennis produced. Kyle Johnson was invited and responded to the Main Survey.

Season, all of the “hours worked” estimates that Dr. Kriegler calculates for the Championship and Fall Instructional League Seasons are based on answers that respondents gave about the 2015 season—which occurred almost a year before the survey took place. Likewise, many of the respondents in Dr. Kriegler’s subset participated in Spring Training in 2015, rather than 2016.

## **B. Each Flaw Identified by Professor Ericksen is Evidenced in the Kriegler Subset, Rendering it Unreliable**

68. I reviewed the survey responses and find evidence consistent with the critiques offered by Professor Ericksen.

### **1. Pronounced Variability in Hours Reported by Respondents Are Consistent with “Satisficing” and/or Voluntary Behavior**

69. Such variability, particularly for players on the same team on the same season, would not be expected if players were at the stadium at the direction of management to conduct the baseball-related activities reflected in daily itineraries. Were that the case, much more uniformity would be expected.

70. The existence of pronounced variability means the survey questions were so burdensome that respondents effectively resorted to guessing, and/or that their arrival and departure time at the stadium was not dictated by the need to perform “work”, instead reflecting individualized time training that was spent voluntarily and/or time that did not involve baseball-related activities (including *e.g.*, eating, hanging out with other players, or playing ping pong.)<sup>55</sup>

71. Dr. Kriegler asserts that he can control for this variability by using the 10<sup>th</sup> Percentile or 25<sup>th</sup> Percentile responses from the survey in his analysis. However, simply chopping off

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<sup>55</sup> See, *e.g.*, Lawson Tr. 150:13-24; Gwynn Tr. 196:20-197:13; Harper Tr. 120:19-121:4; Lieppman Tr. 276:16-277:16; Liberto Tr. 249:17-250:13; Giarraputo Tr. 282:3-11; Tim Pahuta Tr. 154:20-156:7; Kahaulelio Tr. 346:4-18; L. Davis Tr. 175:17-177:4; Gagnier Tr. 158:7-159:4; Alvino Tr. 75:14-79:9; Henderson Tr. 147:24-148:7; Jiminez Tr. 62:24-64:14

the top 90% or 75% of responses provided by participants does not fix the problems with the survey—it merely masks them. If survey respondents are “satisficing,” as the evidence indicates may be occurring, Dr. Dennis (and therefore Dr. Kriegler) cannot be sure that *any* of the responses are accurate, whether at the 10<sup>th</sup> Percentile or the 90<sup>th</sup> Percentile. In addition, to the extent self-interest bias is present in the responses, as the evidence indicates may be occurring, it could as easily be affecting the responses at the 10<sup>th</sup> Percentile in the data as the responses at any other percentile.

72. Further, as described more fully below, marked variability across teams exists even when comparing the 10<sup>th</sup> Percentile or 25<sup>th</sup> Percentile responses, as shown in the examples below:

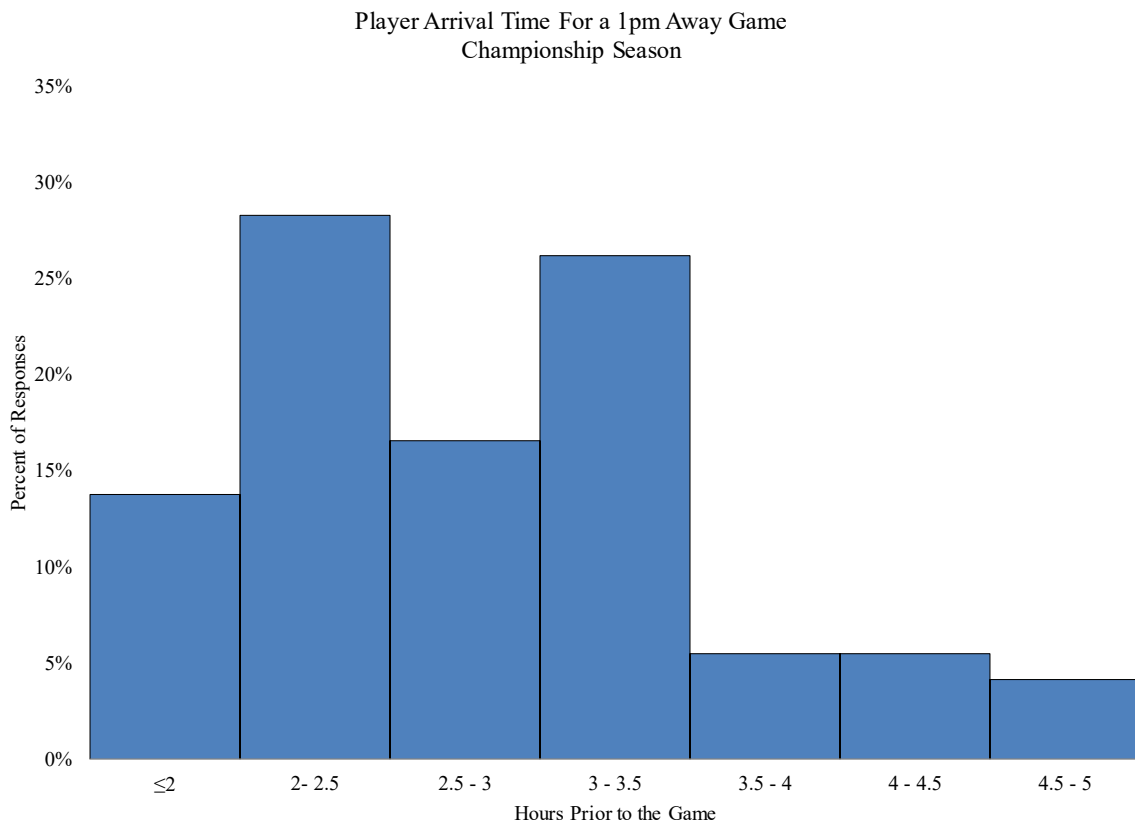
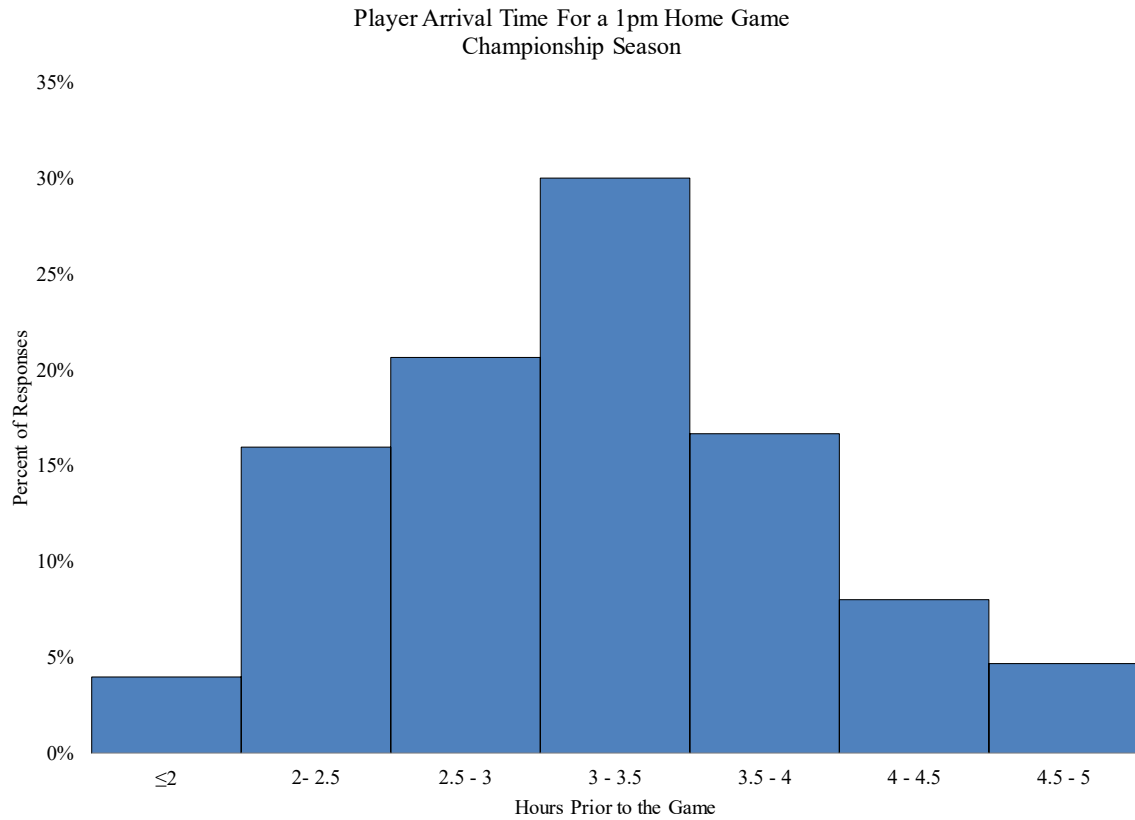
<u>Season</u>	<u>Game Type</u>	<u>Team 1</u>	<u>10th Percentile</u>	<u>Team 2</u>	<u>10th Percentile</u>
EXT	Home	Los Angeles Dodgers	6.33	Detroit Tigers	1.10
FIL	Away	Houston Astros	7.00	St. Louis Cardinals	1.98
REG	Home Night	San Diego Padres	6.75	Chicago Cubs	3.15
ST	Away	San Diego Padres	5.50	Houston Astros	1.78
<u>Season</u>	<u>Game Type</u>	<u>Team 1</u>	<u>25th Percentile</u>	<u>Team 2</u>	<u>25th Percentile</u>
EXT	Home	Los Angeles Dodgers	6.44	Detroit Tigers	1.63
FIL	Away	Houston Astros	7	St. Louis Cardinals	2.31
REG	Away Day	New York Mets	5.25	St. Louis Cardinals	1.75
ST	Home	San Diego Padres	5.5	Seattle Mariners	2.69

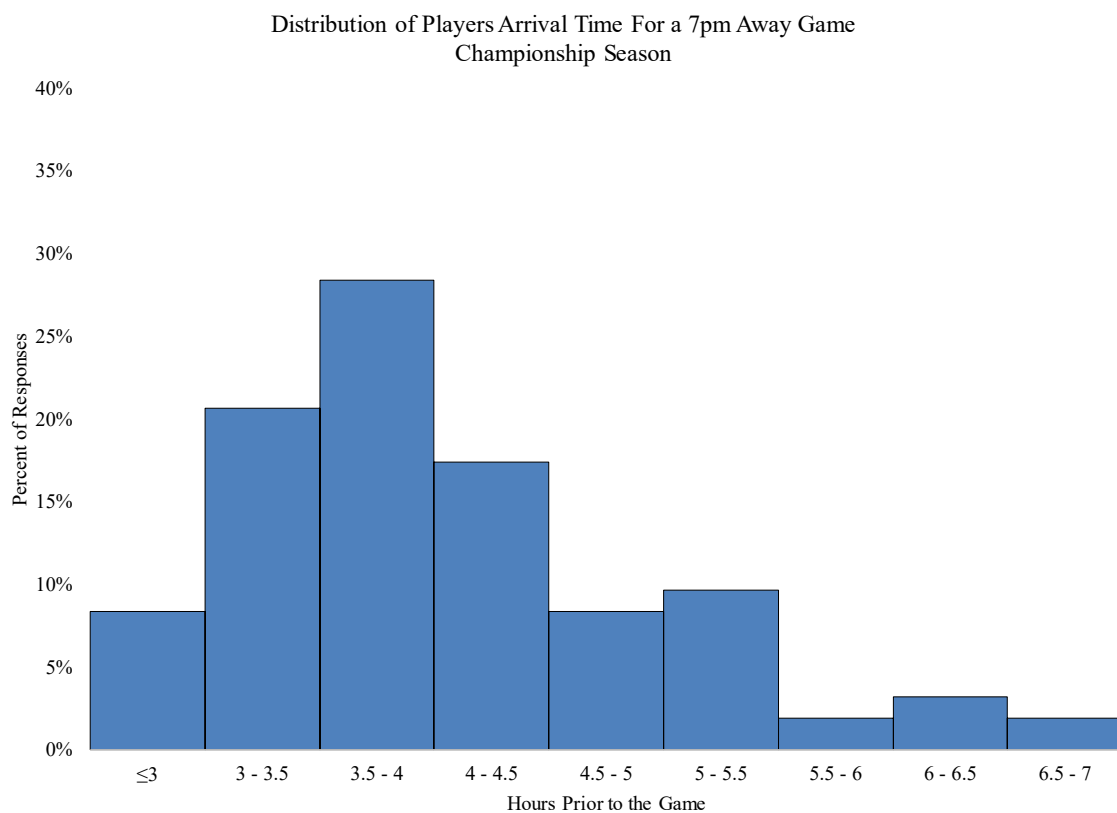
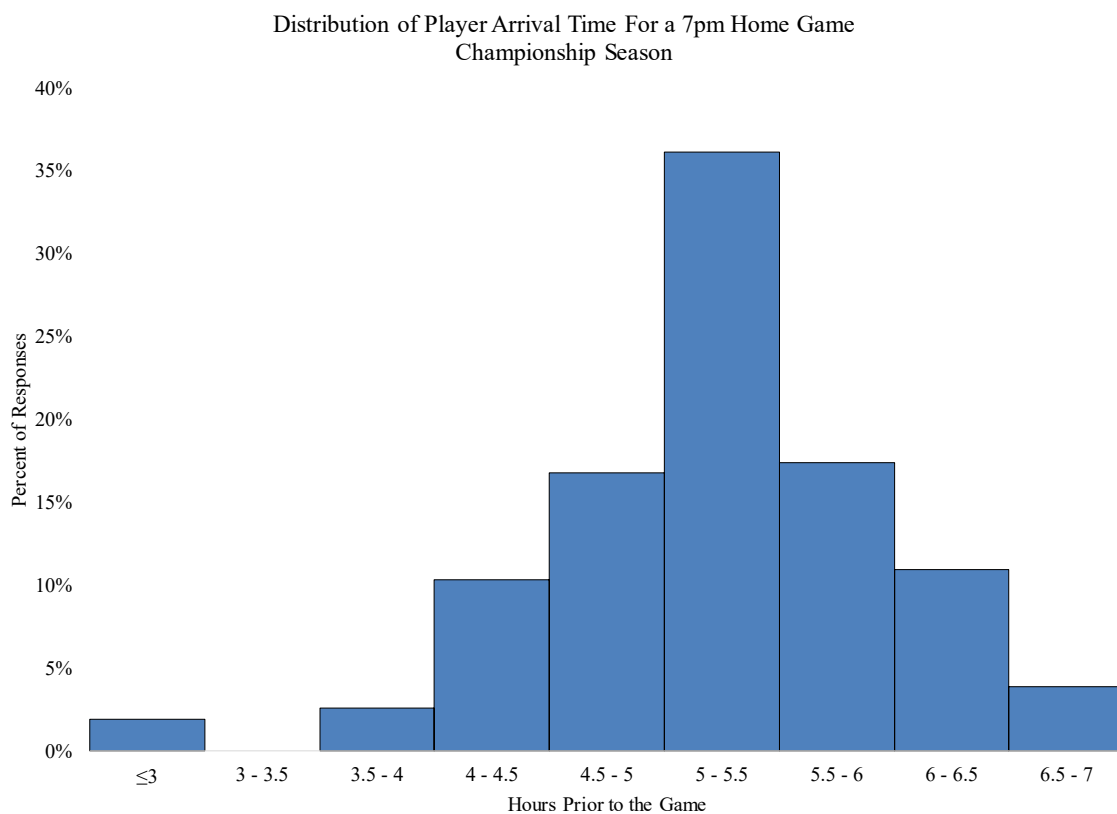
73. The variability among players on the same team during the same season, as well as across teams, belies Dr. Kriegler’s assumption that a single estimate of purported “hours worked” during a season based on the 10<sup>th</sup> or 25<sup>th</sup> Percentile from Dr. Dennis’ survey can be applied across Class Members and the Named Plaintiffs to estimate alleged damages.

## **2. Empirical Evidence Reveals that Players Were Confused by the Survey and Found it Cognitively Burdensome**

74. Evidence that respondents may have been confused by the questions are found, *e.g.*, in a comparison of reported arrival times on Home versus Away Games during the Championship Season. Dr. Dennis’ survey asks respondents about their arrival time “at their stadium or the opposing team’s stadium.” Below is a comparison for Home and

Away Day games, as well as for Home and Away Night games, during the Championship Season.





75. The wide range of reported arrival times for Away Games indicates that, to the extent they were not just satisficing, some respondents likely reported their arrival time at their stadium to travel to the game, while others reported their arrival time at the opposing team's stadium. To the extent respondents were answering about their arrival at their own stadium, travel time from their facility to the opposing team's stadium would be embedded. In his formulaic estimate of alleged damages, however, Dr. Kriegler adds estimated travel time to and from the game to the reported game time and pre-game and post-game hours estimated using the survey. According to his Google Maps' estimates, travel time can range from 15 minutes to over 12 and a half hours during the Championship Season. While travel time during the Training Seasons would be expected to be shorter, to the extent survey respondents were including travel time in their responses about Away games—and the empirical evidence suggests that at least some did—Dr. Kriegler's addition of travel time will results in double-counting. As a result, his results will be overestimated, but to an unknowable degree.
76. Evidence that respondents found the survey cognitively burdensome is found by observing that the response rates dwindled as the survey went on. Dr. Dennis's questions about the arrival, departure, and eating times for the various activities (Spring Training, Extended Spring Training, Championship Season, Fall Instructional League, Off Season Training) were presented in different modules. Dr. Dennis explains that "the modules are shown to respondents in a sequence determined by the relative recency that the minor league player took part in the activity. The least recently performed activity is shown first to the respondent."<sup>56</sup> The order the modules were presented is recorded in Dr. Dennis' data, and thus Professor Ericksen and I were able to investigate whether, in the later modules, respondents were more likely to skip questions, which indeed, they were.
77. In his prior declaration, Professor Ericksen showed that the share of respondents who skipped the question for the seven Spring Training time questions varied by which module number they were on.<sup>57</sup> For example, he found that, in looking at respondents who answered about their Spring Training game day arrival question, 3.7% of those

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<sup>56</sup> Dennis Declaration, Attachment 5. Document 696-5, p. 12 of 54.

<sup>57</sup> Ericksen October 2016 Declaration, ¶29.

seeing the module first skipped the question, compared to 11.3% of those who saw that fourth or fifth module.<sup>58</sup> I have repeated this analysis for the subset of respondents who Dr. Kriegler analyzed. For this same example, 4.9% of recent non-opt-ins skipped the question in the first module; however, 11.1% skipped the question in the 4<sup>th</sup> or 5<sup>th</sup> module. For six of the seven Spring Training questions, the share of respondents in Dr. Kriegler's subset who skipped the fourth or fifth module is higher than the share who skipped the first module. And, because respondents should be the most knowledgeable about the later modules, considering they were the most recent to the respondent, this offers further evidence that they skipped the later module questions due to fatigue.

### **3. Empirical Evidence Indicates Dr. Dennis' Survey is Not Representative of the Class**

78. In his March 2016 Declaration, Dr. Dennis stated that planned to “design the survey sample to be representative of the defined class.”<sup>59</sup> I have reviewed the list of players Dr. Dennis randomly selected to invite to the survey and have found evidence that the group of players who completed the survey is not representative of the certified classes. The players who completed the survey differ from those who were invited to complete the survey on several key variables, indicating that non-response bias is an issue about which to be concerned. First, the sample from the Main Survey under-represents non-opt-in players. Among the 7,806 players invited to take the survey, 87.1 percent were non-opt-ins.<sup>60</sup> Yet, this group comprises just 66% of Dr. Dennis' full sample of 720 respondents. Given that the estimates of “hours worked” are lower for non-opt-in respondents than opt-in respondents, the under-representation of non opt-in players in the full sample would result in any estimates based on the full sample being biased upward.<sup>61</sup>

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<sup>58</sup> Ericksen October 2016 Declaration, ¶29; Exhibit C, p. 1. (Exhibit G herein)

<sup>59</sup> Declaration of J. Michael Dennis, Ph.D., in Support of Plaintiffs' Motion for Class Certification, dated. ¶35.

<sup>60</sup> MLBDENM0000693. I note that the number of players invited to the survey as indicated in the file Plaintiffs produced disagrees slightly with the number that Dr. Dennis presents in his report. Moreover, there are other discrepancies between in his report and the data indicating the players who were invited to the survey. For example, although Dr. Dennis indicated that he removed Named Plaintiffs from the list before selecting his sample, the list of survey invitees includes 20 Named Plaintiffs and at least one Named Plaintiff, Kyle Johnson, actually completed the survey.

<sup>61</sup> See Dennis Reconsideration Declaration. Attachment 2, p.6.



79. Dr. Kriegler attempts to ameliorate this non-response bias issue by relying only on the responses from the non-opt-ins who participated in minor league baseball activities in either 2015 or 2016. Yet, this does not solve the problem of non-response as there are other areas in which the respondents for the full Main Survey, as well as Dr. Kriegler's subset of the survey, are also not representative.
80. For example, I understand that many minor league baseball players are foreign-born and that these foreign-born players are part of the class. Yet, data regarding the players who were invited to the Main Survey suggest that foreign-born players are seriously under-represented in the survey. As shown in Exhibit H, 42.2% of players invited to the survey had foreign addresses, with sizeable proportions from the Dominican Republic and Venezuela specifically. Yet, foreign players only comprise 10.3% of the players who completed the survey. Indeed, the proportion of players who completed the survey and were from the Dominican Republic and Venezuela (6.4%) is much lower than the proportion who were invited to participate (34.4%). This under-representation is also found in the subset of the data on which Dr. Kriegler relies. As shown in Exhibit H, the proportion of foreign-born players from this subset who completed the survey (9.5%) was well below the proportion invited to participate in the survey (42.2%). Similarly, the proportion of players from the Dominican Republic and Venezuela who completed the survey (6.3%) was below the proportion invited to participate (34.4%).
81. Moreover, neither Dr. Dennis nor Dr. Kriegler demonstrate that the survey is representative of California League players—or even that responses from California League players about their time in the California League can be identified among survey respondents. As he testified at his deposition, Dr. Dennis did not design his survey to produce an estimate specific to the California League players; it was designed to generate nationwide estimates.<sup>62</sup> Within the subset of respondents on which Dr. Kriegler is relying, the survey contains only nine or 10 respondents (depending on the question) who participated in the California League in 2015. However, because eight of these nine players played in both the California League and at least one other league during the

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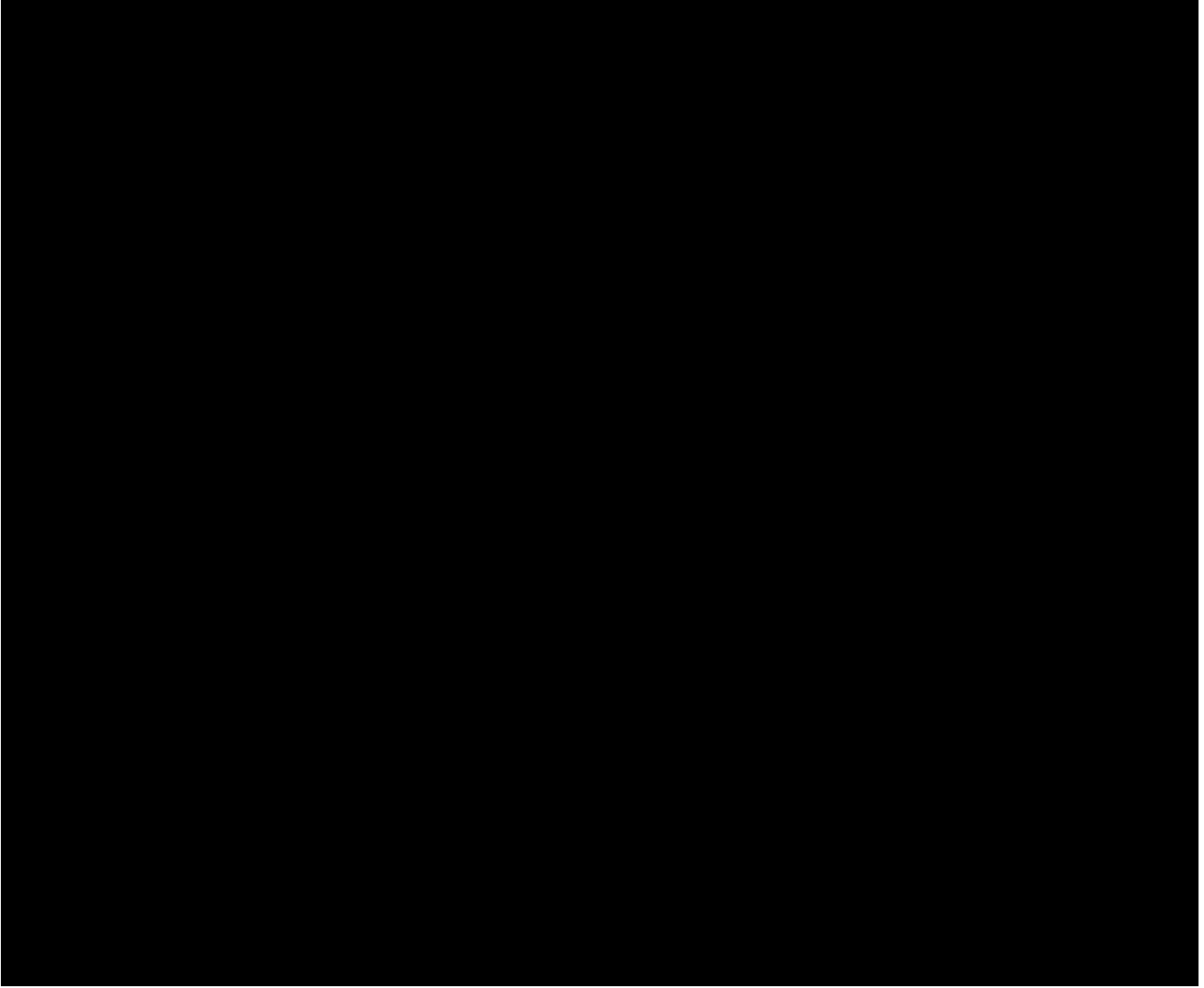
<sup>62</sup> Dennis Deposition, 66:18 -70:9.

2015 Championship season, Dr. Kriegler cannot determine whether their survey answers to the questions about the Championship Season in 2015 are about their experiences in the California League or about their experiences in another league. Moreover, if Dr. Kriegler tried to increase the sample size of California League respondents by identifying members of the California class out of the full set of players who responded to Dr. Dennis' Main Survey, he would encounter a similar issue in that the survey answers respondents provided would not necessarily be about their time in the California League because the survey asked about arrival and departure times in the most recent season they participated. Thus, if a player played in the California League in 2013 and a different league in 2015, his survey responses would, at best, measure his arrival and departure times in the 2015 season when playing for a different league, not from time in 2013 when in the California League.

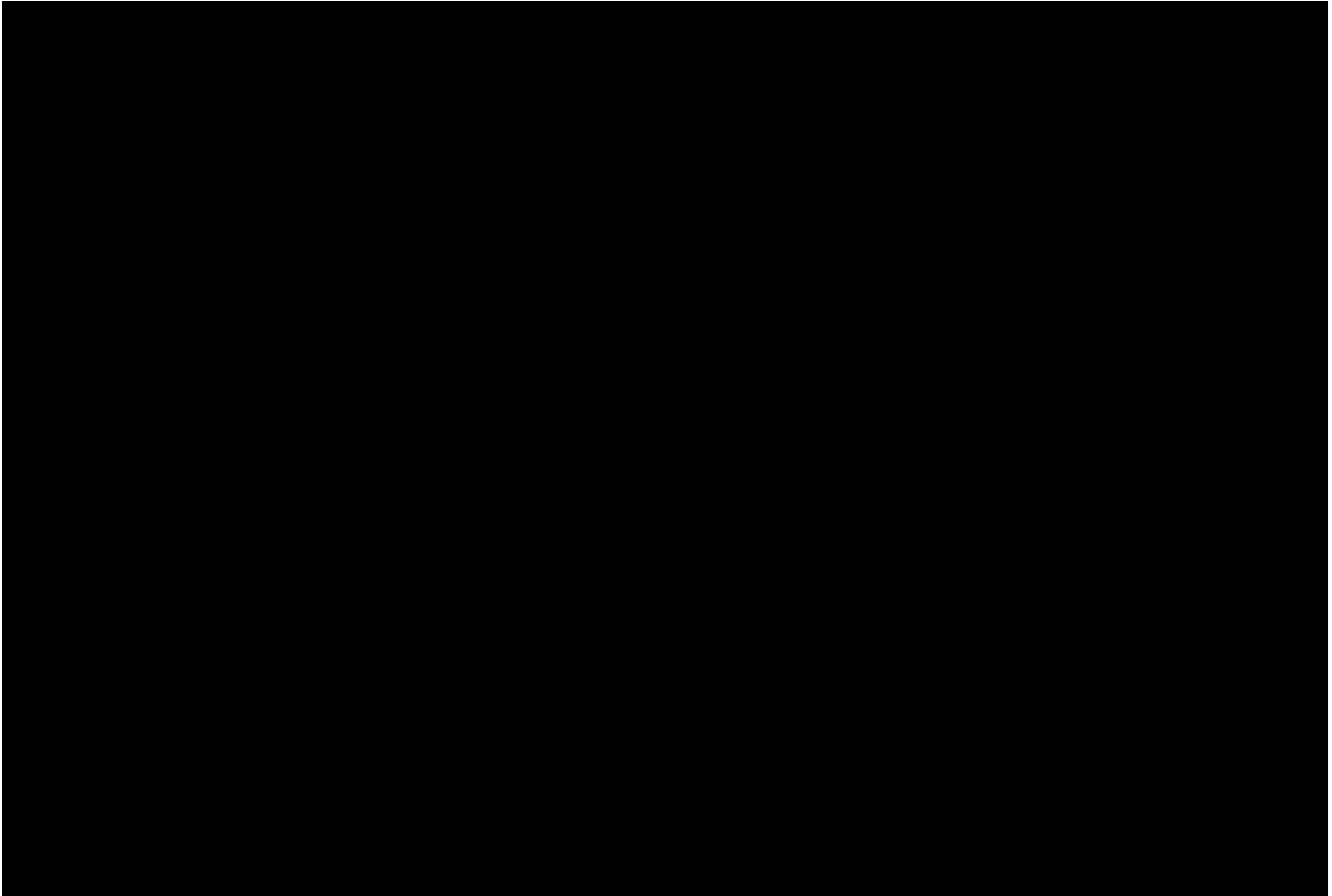
82. Dr. Kriegler's proposed formulaic measure of alleged damages does not address any of Professor Ericksen's theoretical critiques of the survey.

### **VIII. Without the Purported "Hours Worked" from the Kriegler Subsets, Dr. Kriegler's Estimates of Alleged Damages Are Reduced by 93% to 100%**

83. As explained above, the data from the Kriegler Subset accounts for 100% of the purported "Hours Worked" for the Arizona and Florida classes, as well as for the Training Seasons of the FLSA collective and for Named Plaintiffs. That data also accounts for 48% and 51% of hours entering into Dr. Kriegler's estimation of alleged damages for the Championship Season (depending on whether 10<sup>th</sup> Percentile or 25<sup>th</sup> Percentile survey hours are used).
84. More specifically, for the Training Seasons, Dr. Kriegler estimates "Most Often Arrival Time," "Most Often Departure Time" and "Time for Meals" using the responses from the Kriegler Subset. His estimate of purported "Hours Worked" is calculated by taking the difference between reported arrival time and departure and removing time reported for meals.

85. Without the purported “Hours Worked” from the survey, Dr. Kriegler’s formulaic approach would generate no alleged damages for the Arizona and Florida classes, or for the FLSA collective and the Named Plaintiffs during the Training Seasons.
  86. For the Championship Season, Dr. Kriegler estimates “Pre-Game Hours Worked” and “Post-Game Hours Worked” using the responses from the Kriegler Subset. To estimate total purported “Hours Worked,” he then adds game time (obtained from MiLB website) and estimated travel time (estimated using Google Maps.)
  87. His estimate of alleged damages during the Championship Season for the California Class and the FLSA collective would be reduced by 93% using 10<sup>th</sup> percentile survey hours and by 94% using 25<sup>th</sup> percentile survey hours.
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88. Further, without the survey data, his estimates of alleged damages for the Named Plaintiffs would also be substantially reduced. Exhibit 15A of the Kriegler Supplemental Report recreated below excluding the purported “Hours Worked” from the Kriegler Subset:



## **IX. Conclusion**

89. While Dr. Kriegler asserts that purported “Hours Worked” can be “estimated reliably and precisely for each Potential Class Member,” and can be “readily incorporated” into his measure of alleged damages, these assertions are unsupported and, in fact, are inconsistent with the evidence in this matter.

90. First, the pronounced variability in responses across teams and among respondents from the same team in the same season goes entirely unexplored by both Dr. Dennis and Dr. Kriegler. While alerted to this variability in prior reports that Professor Ericksen and I submitted, they go so far as to assert it would be inappropriate to consider the variability

within and across teams. However, Dr. Kriegler cannot know whether this variability occurred because: (i) different expectations about “Hours Worked” exist for different affiliates at different Club levels; (ii) the respondents differed in the amount of non-baseball activities or voluntary baseball-related activities they engaged in between their reported arrival and departure times at the facility/stadium; and/or (iii) the survey design was flawed. While Dr. Kriegler asserts that he has controlled for this variability by using the 10<sup>th</sup> Percentile or 25<sup>th</sup> Percentile responses from the Kriegler Subset in his analysis, he merely masks these problems by throwing away 75% or 90% of the survey responses. He still has no way to evaluate whether the purported “Hours Worked” estimated at these arbitrary points are reliable estimates of hours spent on team baseball-related activities across all classes and the Named Plaintiffs. As explained above, whatever the reason, the variability (coupled with the small samples introduced by Dr. Kriegler’s reliance on the Kriegler Subset), demonstrates that Dr. Kriegler’s estimates of purported “Hours Worked” (and, therefore, his estimates of alleged damages) are unreliable.

91. The “validation” exercises done by Dr. Dennis and Dr. Kriegler, in which they compared purported “Hours Worked” estimated using the survey and itineraries/testimony were not done at the team level and therefore simply ignored this variability. Importantly, this purported “validation” is the only use that Dr. Kriegler makes of these other sources of representative evidence. We conducted the comparison at the team level and found *no* correlation between purported “Hours Worked” estimated using the Kriegler Subset and estimated using the sampled itineraries or Plaintiff testimony. That is, these correlations provide no support for the reliability of the survey.
92. Given the variability in survey responses across and within teams, a sufficiently large sample of respondents from each team is needed to capture this variability and ensure representativeness of the resulting estimates across the relevant populations. The Kriegler Subset, however, has zero or few respondents from each team in each season. As such, Dr. Kriegler can offer no assurance that the estimates of purported “Hours Worked” are representative of the classes, the members of the FLSA collective, or Named Plaintiffs. In turn, he can offer no assurance that his associated estimates of alleged damages are reliable.

93. The variability in the survey responses from the Kriegler Subset across respondents in the same team in the same season is also inconsistent with Plaintiffs’ allegations that all Clubs required players to engage in the same amount of team-related baseball activities. Again, instead, this variability indicates that: (i) different affiliates have different expectations about “Hours Worked”; (ii) respondents varied in the amount of non-baseball-related activities or voluntary, individualized baseball-related activities they engaged in between their arrival and departure from the stadium/facility; and/or (iii) the survey design is flawed. In any event, the observed variability means that Dr. Kriegler should have—but cannot due to the small number of respondents—used California League responses to estimate any alleged damages to the California Class.
94. I have confirmed that other problems identified by Dr. Ericksen exist in the Kriegler Subset and render his estimates of purported “Hours Worked”, and therefore his estimates of alleged damages, additionally unreliable.
95. Adjusting Dr. Kriegler’s estimates to remove the unreliable “Hours Worked” generated from the survey reduces his estimates of alleged damages to zero for the Arizona and Florida classes, as well as for the FLSA collective and Named Plaintiffs during the Training Seasons. It also reduces his estimates of alleged damages during the Championship Season by more than 90% for the California Class, the FLSA collective and the Named Plaintiffs.

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My work in this matter is on-going. I reserve the right to update or modify my opinions based on new information that becomes available to me.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on September 27, 2021, at Mattituck, New York.



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Denise N. Martin



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## Exhibit A

### DENISE NEUMANN MARTIN Managing Director

#### Education

**Harvard University**

Ph.D., Economics, 1991

M.A., Economics, 1988

**Wellesley College**

B.A., *magna cum laude*, Economics and French, 1985

Honors: Phi Beta Kappa

#### Professional Experience

2001-	<b>NERA Economic Consulting</b> Managing Director
1998-2000	Vice President
1994-1997	Senior Consultant
1991-1993	Senior Analyst
1986-1990	<b>Harvard University</b> Teaching Fellow, Department of Economics Taught courses in Microeconomics and Industrial Organization at the graduate and undergraduate levels. Assisted senior honors candidates with theses. Awarded Danforth Prize in Teaching.
1986-1990	Research Associate, Department of Economics Projects included an investigation of the timing of international horizontal mergers, an evaluation of the effect of generic entry into the pharmaceutical market, and a comparison of technical efficiency across countries.



- Urban Systems Research and Engineering/Economica, Inc.**  
1987-1988 Economic Consultant  
Consulted on all aspects of government agency projects, including proposals and the design of survey instruments. Provided economic forecasts and technical support.
- Federal Reserve Bank of New York**  
1985-1986 Assistant Economist, International Financial Markets  
Analyzed Eurobond markets, interest rate swap markets, and US commercial banks' balance sheets.

## Testimony (4 years)

Declaration, United States District Court for the Southern District of New York in the matter of *Steven Buffington et al. v Progressive Advanced Insurance, Co.*, 2021.

Expert Report, United States District Court for the District of Delaware in the matter of *Teddy Archer, et al. v. Defenders, Inc.*, 2021.

Testimony and Deposition, Superior Court of the State of California, County of Los Angeles in the matter of *Cannon Electric Inc., et al. v. Ace Property & Casualty Insurance Co. et al.* Case Number BC290354, 2021.

Rebuttal Reports and Deposition Testimony United States District Court, Northern District of California, San Jose Division in the matter of *In RE: MacBook Keyboard Litigation*, 2020/2021.

Rebuttal Report, United States District Court, Northern District of Illinois in the matter of *In Re: Shelly Benson and Lisa Caparelli, et al. v. Newell Brands, Inc. and Nuk USA, LLC*, 2021.

Expert Report, Supreme Court of New South Wales, Australia in *The Takata Class Action Proceedings*, 2021.

Testimony and Declaration, United States Bankruptcy Court for the District of Delaware *In re: Boy Scouts of America and Delaware BSA, LLC*, 2021.

Deposition and Rebuttal Report, United States District Court, Northern District of California, San Francisco Division in the matter of *Vicky Maldonado and Justin Carter, et al. v. Apple Inc., AppleCare Service Company, Inc., and Apple CSC, Inc.*, 2020.

Deposition and Rebuttal Declaration, United States District Court for the District of Pennsylvania in the matter of *Marchell Davis and Brandy Gress et al. v. Progressive Advanced Insurance Company and Progressive Specialty Insurance Company*, 2020.

Rebuttal Declaration, United States District Court for the Southern District of New York, in the matter of *Matthew Chamlin, et al. v. Johnson & Johnson and McNeil Nutritionals, LLC*, 2020.

Deposition and Declaration, Indiana Commercial Court, State of Indiana, County of Marion in the matter of *Amanda Haywood, et al. v. Progressive Palloverde Insurance Company*, 2020.

Expert Report before the United States District Court, District of New Jersey in *Zachary Galicki, et al., v. State of New Jersey, et al.*, and *GW Car Service, LLC, et al., v. State of New Jersey, et al.*, 2020.

Declaration, United States District Court, Southern District of Florida in the matter of *Michael Paris, as Personal Representative of the Estate of Henry Paris, Jr., deceased, et al. v. Progressive American Insurance Company, and Progressive Select Insurance Company*, 2020.

Deposition Testimony and Rebuttal Report, United States District Court, Southern District of New York in the matter of *Angel Hernandez v. The Office of the Commissioner of Baseball and Major League Baseball Blue, Inc.*, 2020.

Expert Report, United States District Court, Southern District of New York in the matter of *In Re Signet Jewelers Limited Securities Litigation*, 2019.

Deposition Testimony, Supplementary Response Affidavit and Affidavit, Ontario Superior Court of Justice in the matter of *Dara Fresco vs. Canadian Imperial Bank of Commerce*, 2017/2019.

Testimony, Supplemental, Expert and Rebuttal Reports, United States District Court Eastern District of New York, in the matter of *D. Joseph Kurtz, et al. vs. Kimberly-Clark Corporation and Costco Wholesale Corporation*, 2015/2019.

Deposition Testimony and Rebuttal Declaration, United States District Court for the Southern District of New York in the matter of *Nicholas Parker, et al. v. United Industries Corporation*, 2019.

Declaration, United States Bankruptcy Court Southern District of New York in the matter of *Rapid-American Corporation, et.al., v. Travelers Casualty and Surety Company, et al.*, 2019.

Deposition Testimony, Rebuttal and Expert Reports, United States District Court Central District of California, Western Division in the matter of *Oaktree Principal Fund V, LP., et al. v. Warburg Pincus LLC, et al.*, 2018/2019.

Rebuttal Report, United States District Court, Northern District of California, San Jose Division, in the matter of *Patricia Weeks, et al v. Google, LLC*, 2019.

Reply Declaration, Deposition Testimony, and Rebuttal Declaration, United States District Court for the Southern District of New York, in the matter of *Suzanna Bowling, et al. v. Johnson & Johnson and McNeil Nutritionals, LLC*, 2018.

Deposition Testimony and Expert Report, United States District Court Northern District California in the matter of *Colleen Gallagher et al. v. Bayer AG, Bayer Corporation, and Bayer Healthcare LLC*, 2018.

Deposition Testimony, Alameda County Superior Court in the matter of *Stephen M. Snyder, Jack L. Luikart, and Sandra R. Hernandez, solely in their capacities as trustees of the Western Asbestos Settlement Trust v. California Insurance Guarantee Association*. 2018.

Rebuttal Declaration, United States District Court for the Northern District of California, in the matter of *Jackie Fitzhenry-Russell v. The Coca Cola Company; and DOES 1-10, and DOES 1-50*, 2018.

Rebuttal Report, United States District Court Central District of California, in the matter of *David Spacone v. Elmer's Products, Inc., a Delaware Corporation; and DOES 1-10, inclusive*, 2018.

Rebuttal Report, United States District Court Central District of California, in the matter of *Stephen Wilson v. Odwalla, Inc., a California Corporation; The Coca Cola Company, a Delaware Corporation; and DOES 1-10, inclusive*, 2018.

Testimony, Deposition and Expert Report, United States District Court Southern District of New York, in the matter of *Effat S. Emamian v. Rockefeller University*, 2018.

Deposition Testimony, Rebuttal and Supplemental Declarations, U.S. District Court, Northern District of California, in the matter of *Preston Jones and Shirin Delalat, et al. v. Nutiva, Inc.*, 2017/2018.

Supplemental and Rebuttal Declarations, United States District Court Eastern District of California, in the matter of *Joan Martinelli, et al. v. Johnson & Johnson and McNeil Nutritionals, LLC*, 2017/2018.

Rebuttal Declaration, United States District Court Southern District of New York, in the matter of *Jaish Markos, et al. v. Russell Brands, LLC*, 2018.

Testimony, Deposition and Expert Reports, Circuit Court of Cook County, Illinois County Department, Chancery Division in the matter of *John Crane, Inc. v. Allianz, et al.*, 2015, 2016, 2017.

Deposition Testimony and Declaration, United States Court District of South Carolina Greenville Division in *Myriam Fejzulai and Monica Moore, et al. v. Sam's West, Inc.; Sam's East Inc.; and Wal-Mart Stores, Inc.*, 2017.

Declaration, United States Court Central District of California in the matter of *Morgan Chikosi, et al. v. Sam's West, Inc.; Sam's East Inc.; and Wal-Mart Stores, Inc.*, 2017.

## **Publications and Presentations (10 years)**

"Trends in Wage and Hour Settlements: 2013 Update," (co-author) NERA Monograph, November 2013.

“Trends in Wage and Hour Settlements: 2012 Update,” (co-author) NERA Monograph, March 2013.

“Trends in Wage and Hour Settlements: 2011 Update,” (co-author) NERA Monograph, March 2012.

September 2021

**Exhibit B**  
**List of Materials Relied Upon**

**Previous Declarations:**

- Declaration of Brian Kriegler, Ph.D. In Support Plaintiffs' Motion for Class Certification (March 3, 2016) and all accompanying attachments, exhibits and tables.
- Declaration of J. Michael Dennis, Ph.D. In Support of Plaintiffs' Motion for Class Certification (March 3, 2016) and all accompanying attachments, exhibits and tables.
- Declaration of Denise N. Martin, Ph.D. (April 4, 2016) and all accompanying attachments, exhibits and tables.
- Declaration of Eugene P. Ericksen, Ph.D. in Support of Defendants' Opposition to Plaintiffs' Motion for Class Certification Under Federal Rule of Civil Procedure 23 (4/4/2016) and all accompanying attachments, exhibits and tables.
- Supplemental Declaration of Brian Kriegler, Ph.D. In Support of Plaintiff's Motion for Class Certification (April 15, 2016) and all accompanying attachments, exhibits and tables.
- Supplemental Declaration of Denise N. Martin, Ph.D. (April 25, 2016) and all accompanying attachments, exhibits and tables.
- Supplemental Declaration of J. Michael Dennis in Support Of Plaintiffs' Motion For Class Certification (5/20/2016) and all accompanying attachments, exhibits and tables.
- Declaration of J. Michael Dennis in Support of Plaintiffs' Motion for Leave to Move for Reconsideration (8/4/2016) and all accompanying attachments, exhibits and tables.
- Declaration of Eugene P. Ericksen in Support of Defendant's Motion to Exclude the Declaration and Testimony of J. Michael Dennis, Ph.D. (September 14, 2016) and all accompanying attachments, exhibits and tables.
- Declaration of Denise N. Martin, Ph.D. in Support of Defendants' Opposition to Plaintiffs' Renewed Motion for Class and Collective Certification Under Rule 23 and the FLSA (10/14/2016) and all accompanying attachments, exhibits and tables.
- Supplemental Declaration of Eugene P. Ericksen, Ph.D. in Support of Defendants' Motion to Exclude the Declaration and Testimony of J. Michael Dennis, Ph.D. (10/28/2016) and all accompanying attachments, exhibits and tables.
- Supplemental Expert Report of Brian Kriegler, Ph.D (8/13/2021) and all accompanying attachments, exhibits and tables.

**Deposition Transcripts:**

- Deposition of J. Michael Dennis (September 20, 2021).
- Deposition of Frank Viola (October 29, 2015).
- Deposition of Jim. J Rantz (December 8, 2015).
- Deposition of Bobby Leon Scales, II (December 16, 2015).
- Deposition of William Alvino (June 4, 2016).
- Deposition of Matthew Lawson (December 2, 2015).
- Deposition of Christopher Gwynn (January 13, 2016).
- Deposition of Brian Harper (October 14, 2015).
- Deposition of Brandon Henderson (February 3, 2016).
- Deposition of Michael Liberto (November 11, 2015).
- Deposition of Nicolas Leo Giarraputo (November 5, 2015).
- Deposition of Tim Pahuta (December 17, 2015).
- Deposition of Jake K. Kahalelio (October 22, 2015).
- Deposition of Leonard Davis (January 13, 2016).

- Deposition of Lauren Joseph Gagnier (October 20, 2015).
- Deposition of Daniel A. Jimenez (June 10, 2016).
- Deposition of Los Angeles Dodgers, LLC and Los Angeles Dodgers Holding Company, LLC (May 24, 2016).
- Deposition of Angels Baseball LP (d/b/a "Los Angeles Angles of Anaheim") (June 3, 2016).
- Deposition of AZPB, L.P. (d/b/a Arizona Diamondbacks) (March 31, 2016).
- Deposition of Athletics Investment Group, LLC (d/b/a Oakland Athletics)(May 19, 2016).

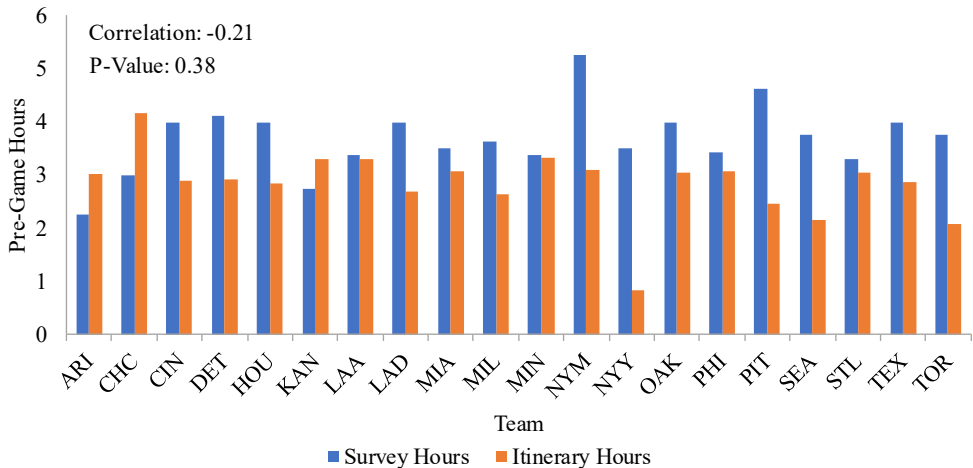
**Academic Articles and Books:**

- David H. Kaye and David A. Freedman (2011), "Reference Guide on Statistics" in *Reference Manual on Scientific Evidence*, 3<sup>rd</sup> Edition, pp. 243-246
- Shari Seidman Diamond (2011), "Reference Guide on Survey Research," in *Reference Manual on Scientific Evidence*, 3<sup>rd</sup> Edition.
- Leslie Kish (1964), *Survey Sampling*, New York: John Wiley & Sons.
- Kriegler, Brian. "Practitioner's Guide to Statistical Sampling; Part 2: Resampling and Bootstrapping: A Method for Determining Confidence Intervals from Small Datasets" *Law360* (Jan 8-11, 2018).
- Bradley Efron and Robert J. Tibshirani (1993), *An Introduction to the Bootstrap*, New York: Chapman & Hall

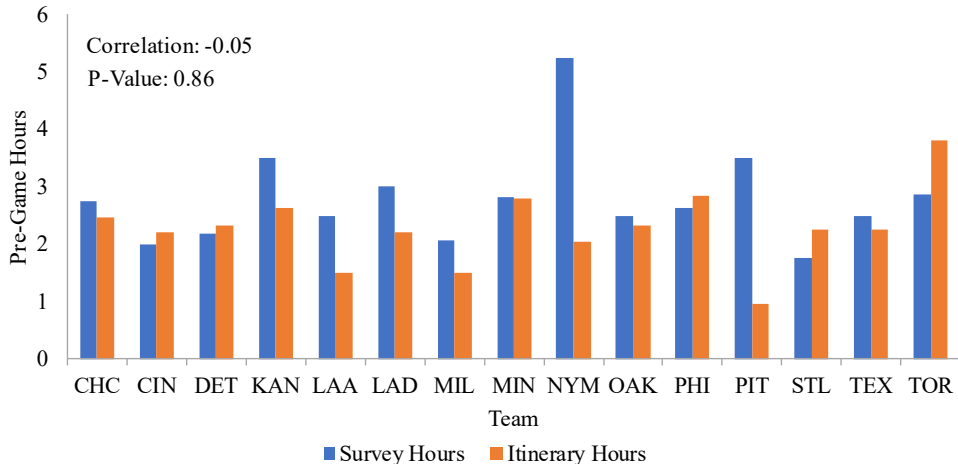
**Other Sources:**

- Baseball-Reference.com
- CHC0018587.xlsx
- MLBDENM0000693
- MLBDENM0000694

# **Exhibit C1**

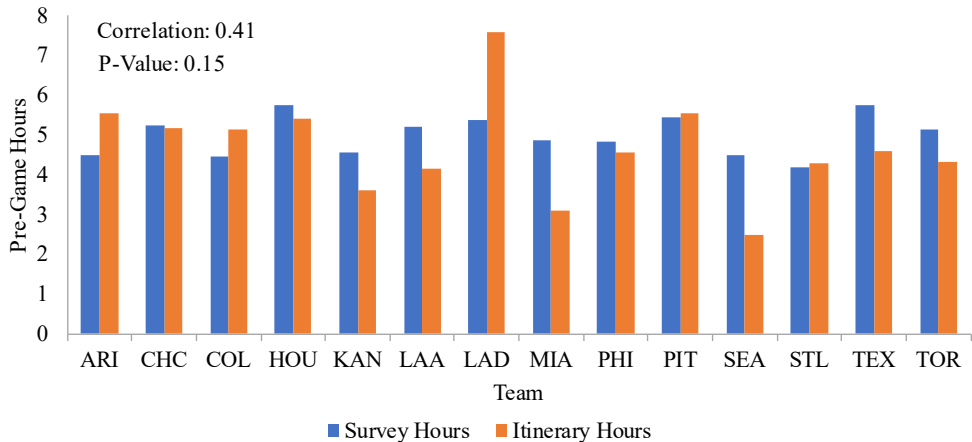






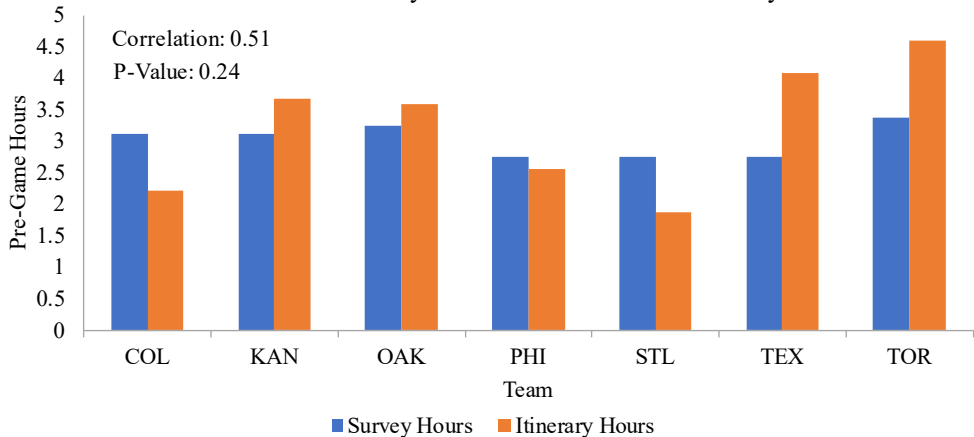
# Home Night Regular Season Game Hours By Team

Earliest Start Time Itinerary Hours vs 25th Percentile Survey Hours



# Home Day Regular Season Game Hours By Team

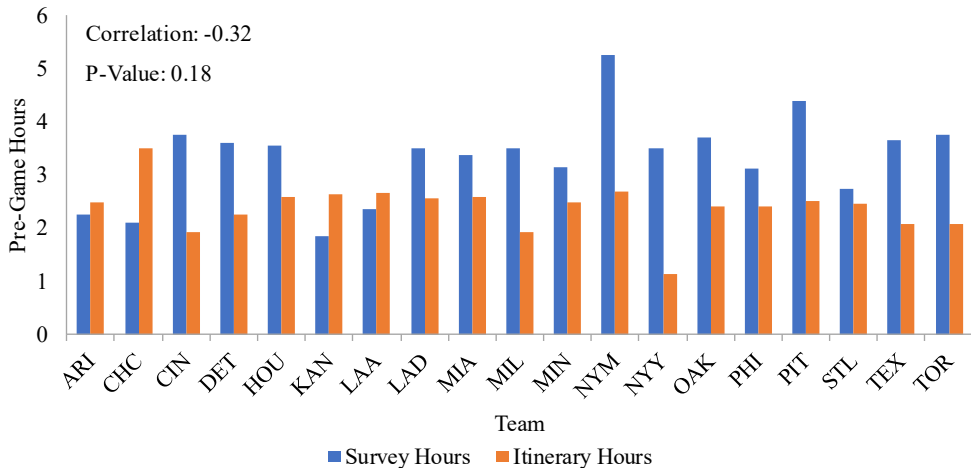
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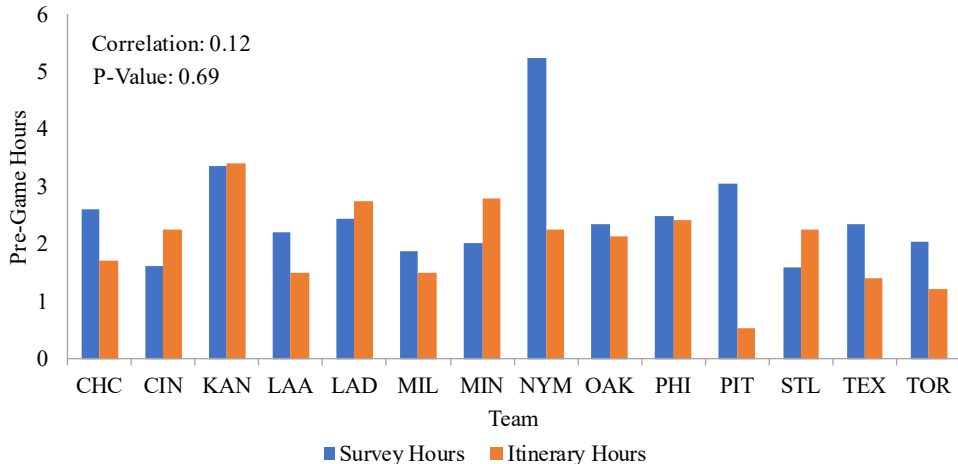


# **Exhibit C2**

Away Night Regular Season Game Hours By Team

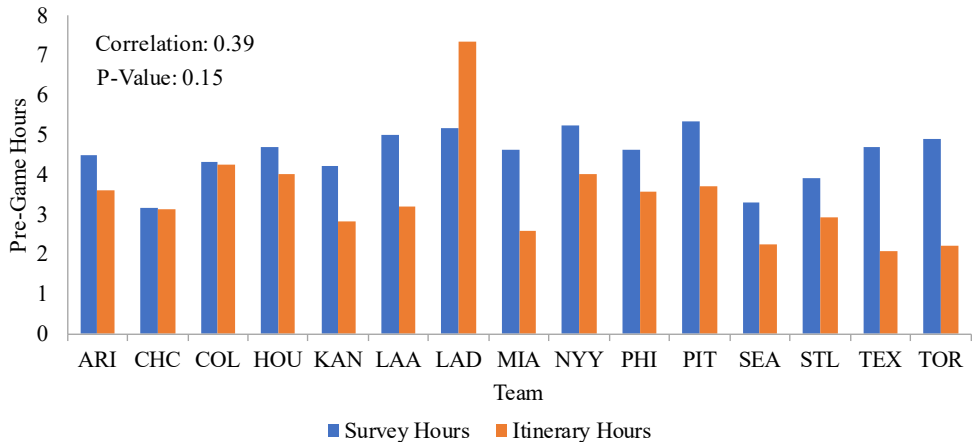
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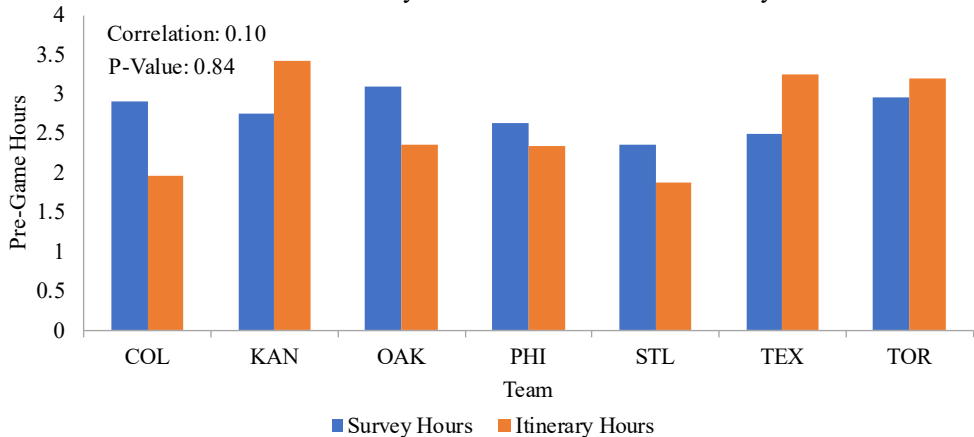
# Home Night Regular Season Game Hours By Team

Latest Start Time Itinerary Hours vs 10th Percentile Survey Hours



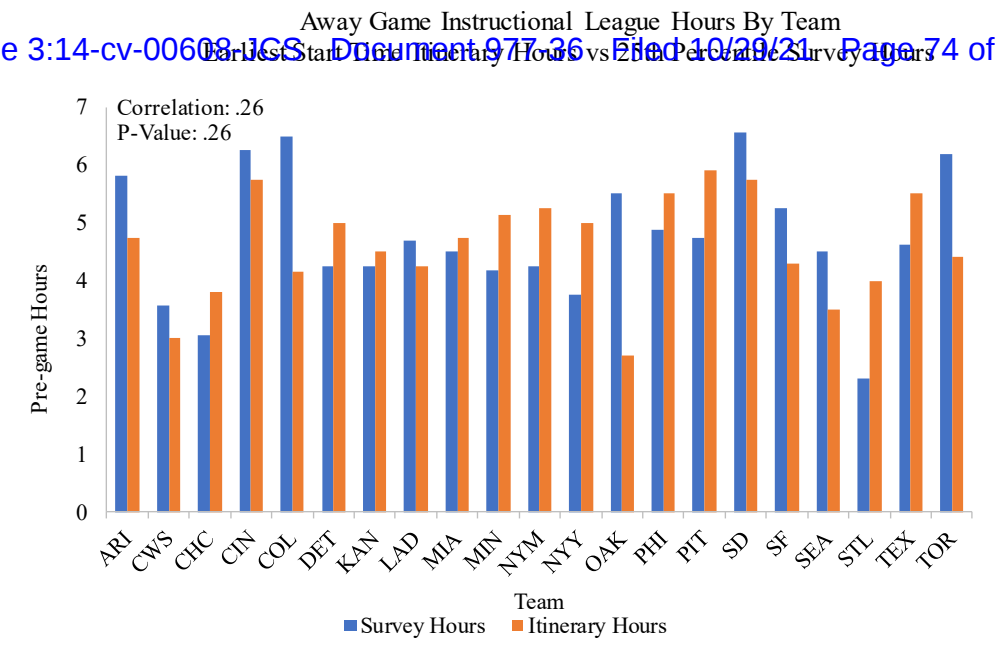
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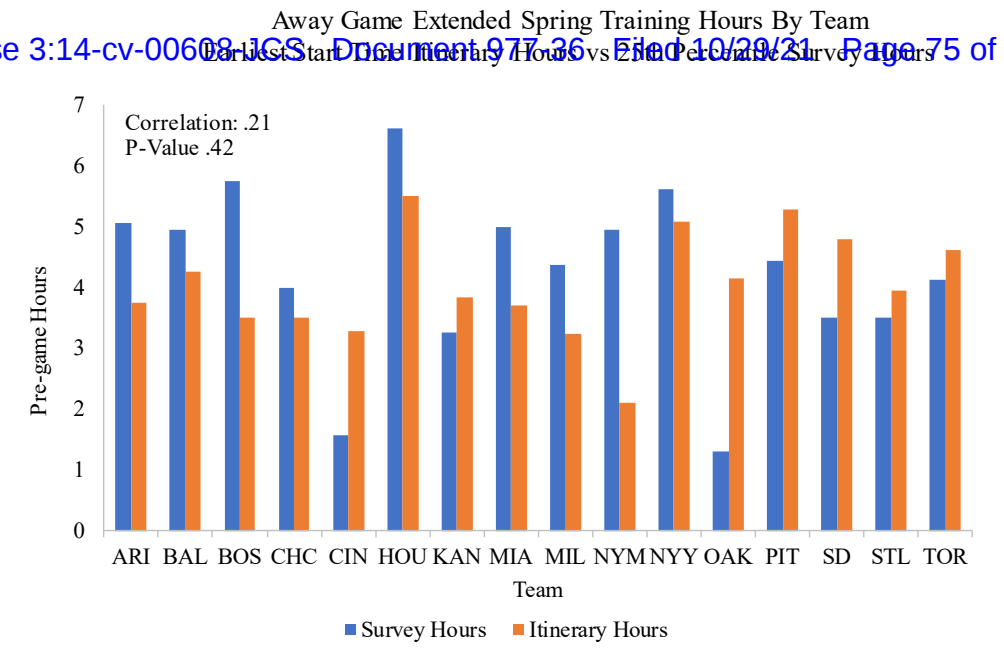
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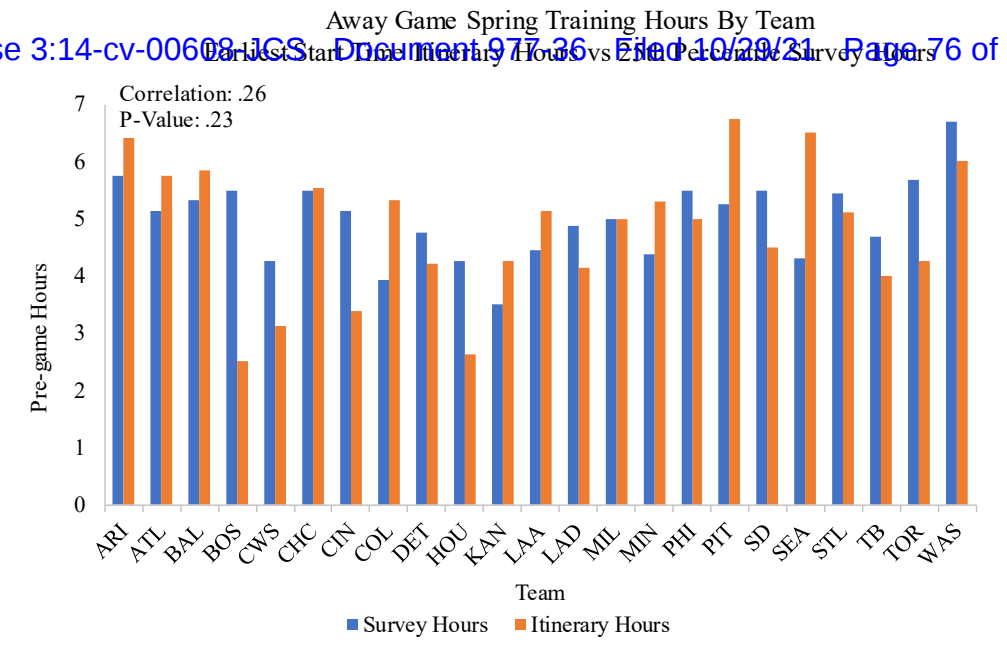


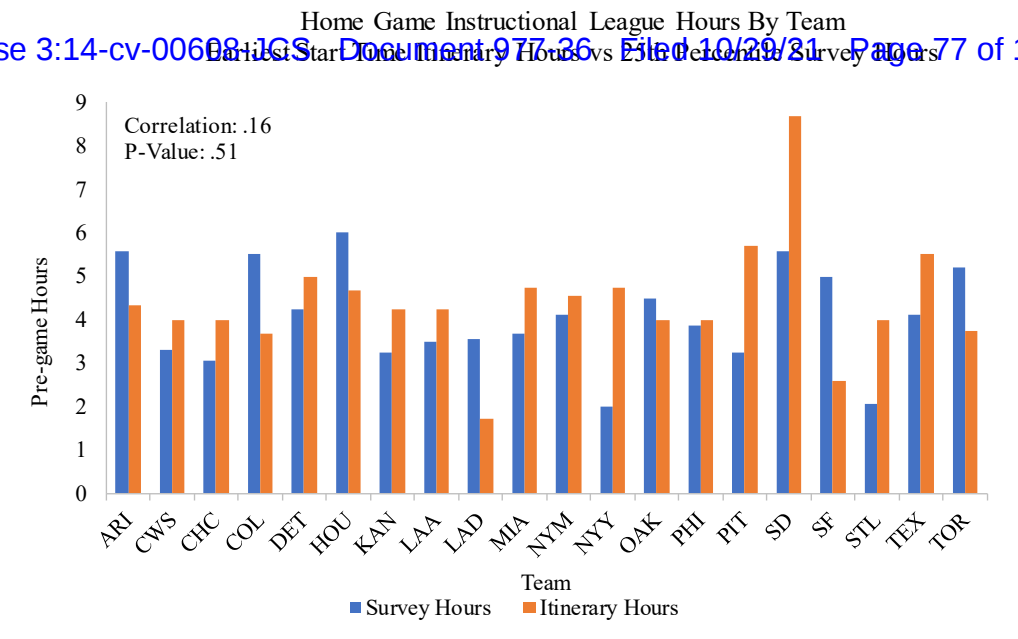


# **Exhibit D1**



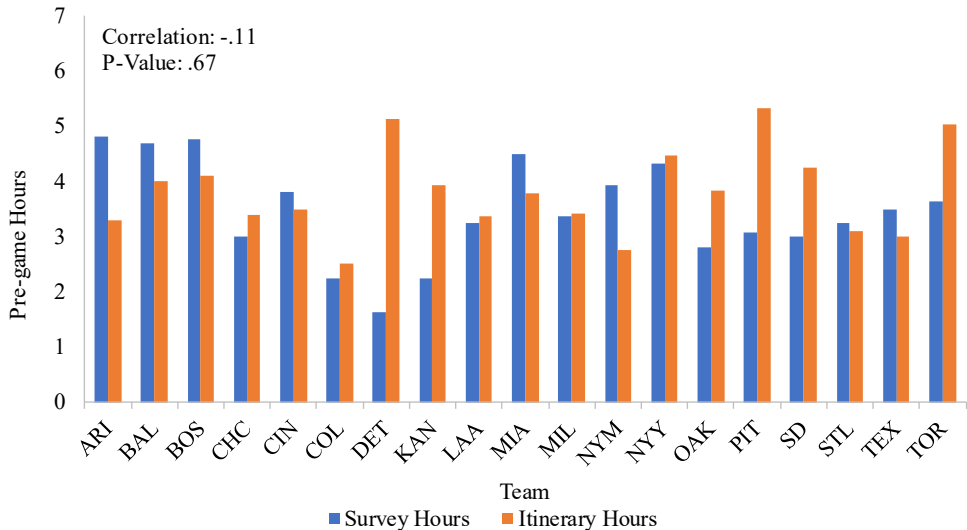


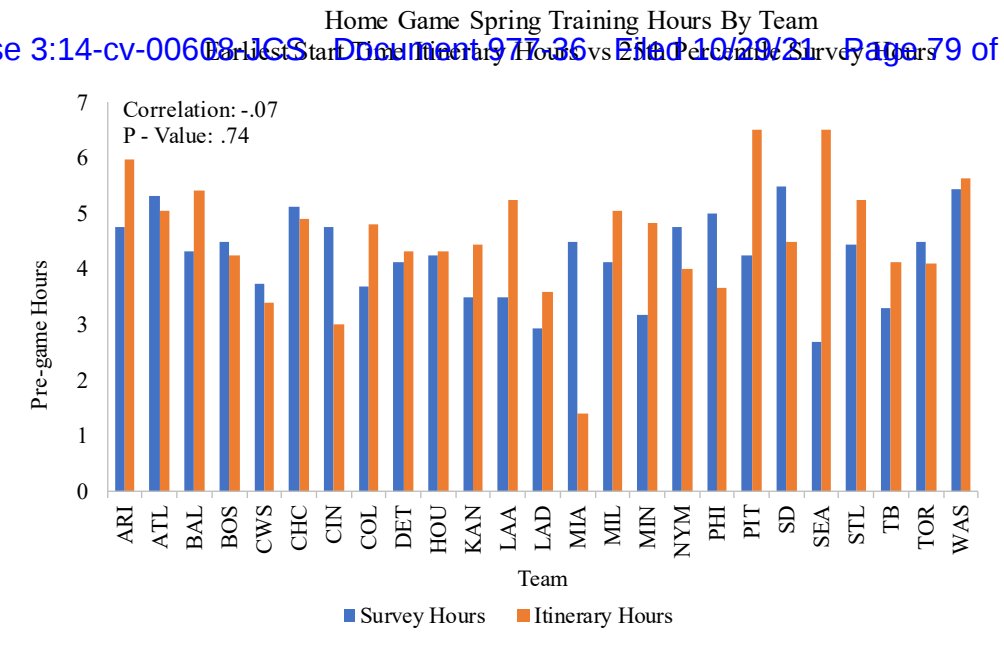




# Home Game Extended Spring Training Hours By Team

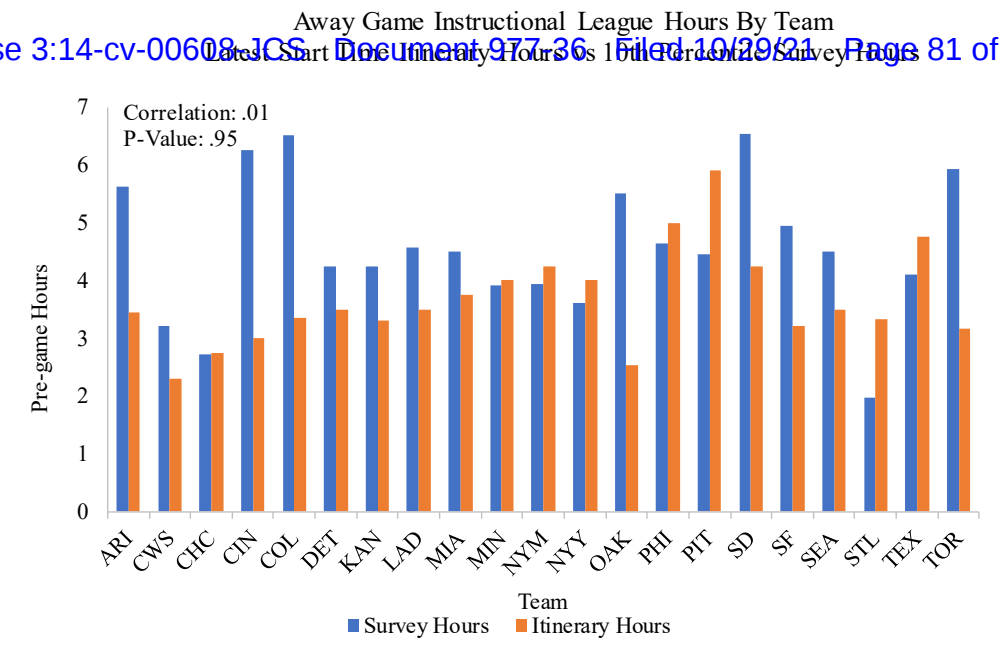
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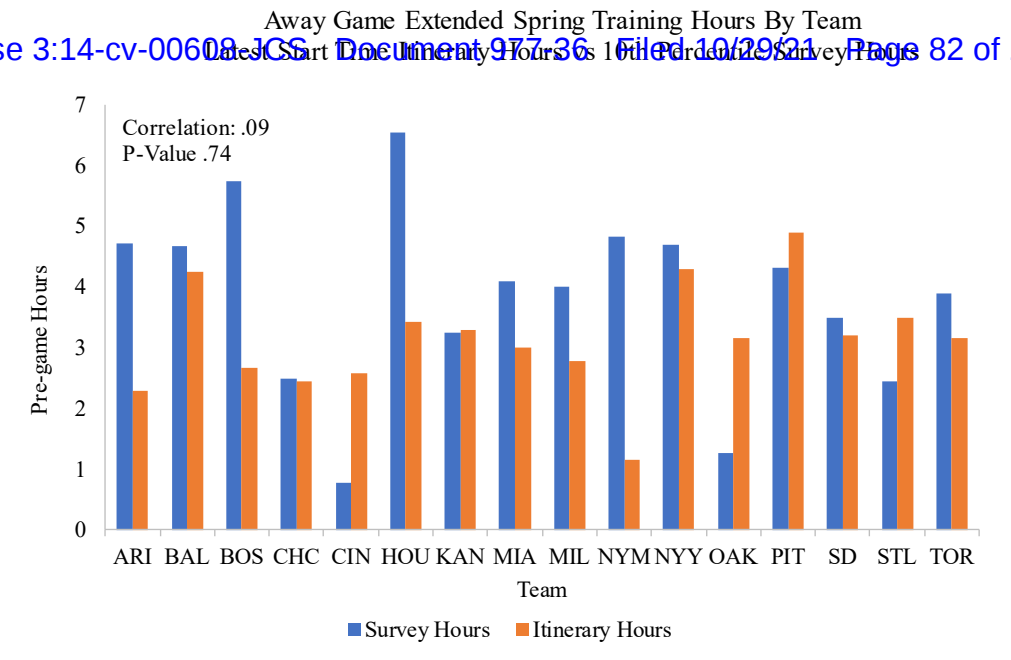


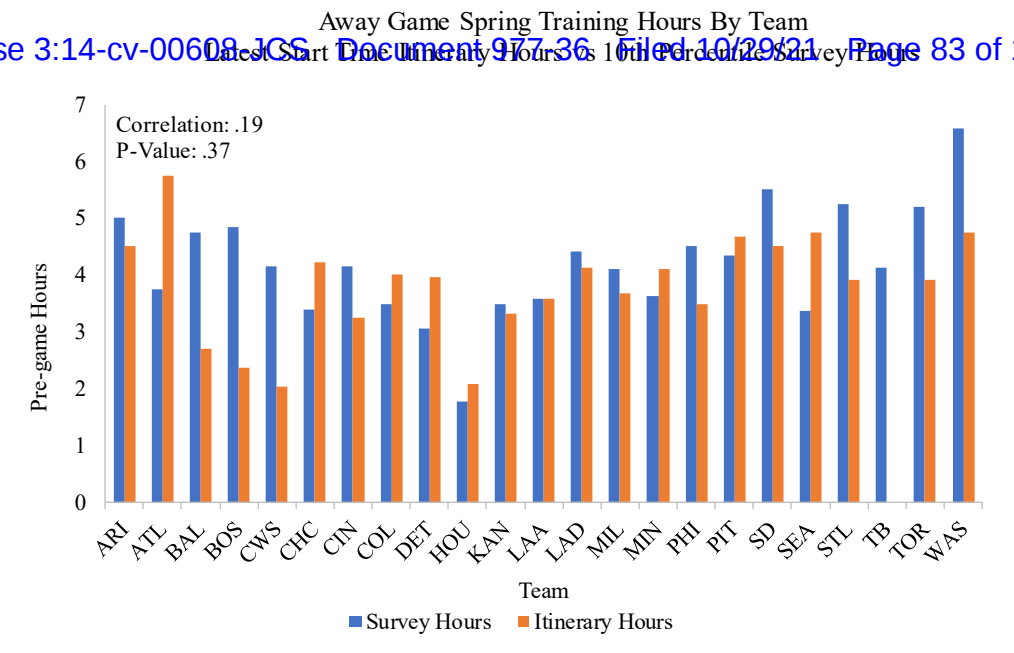


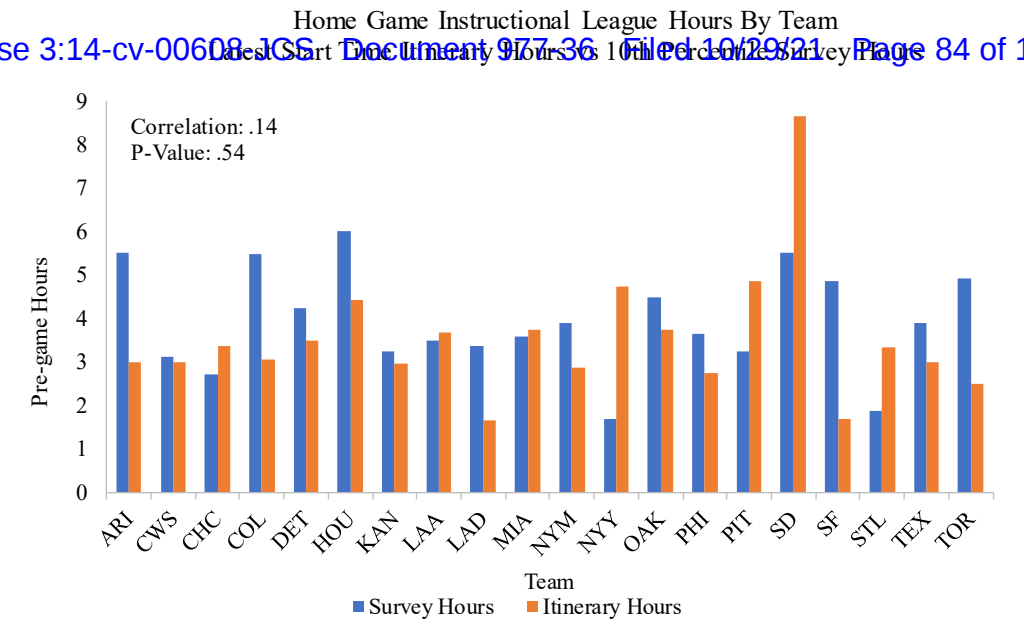
# **Exhibit D2**

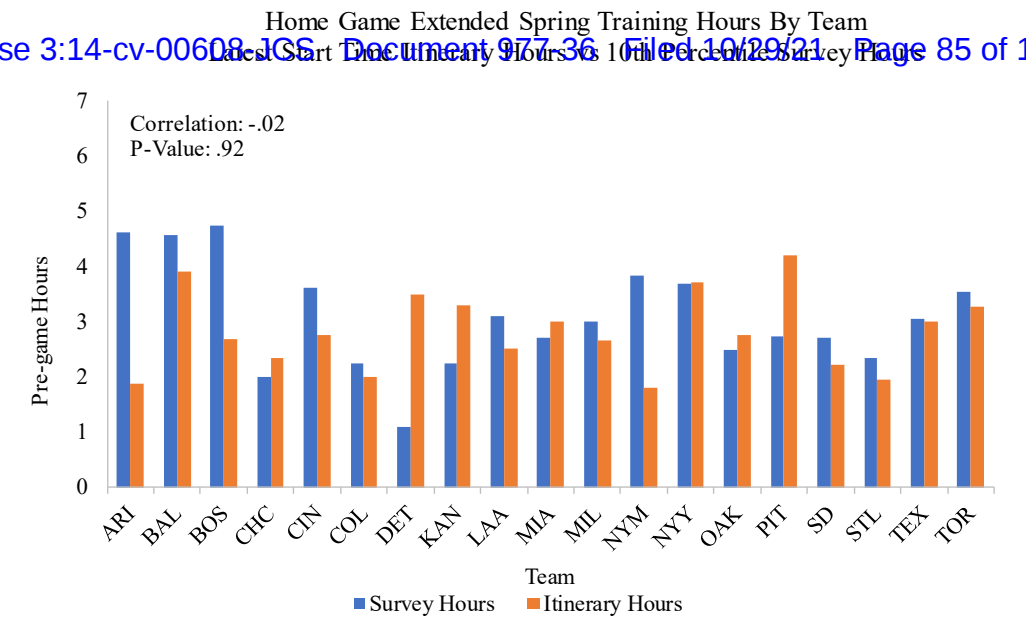




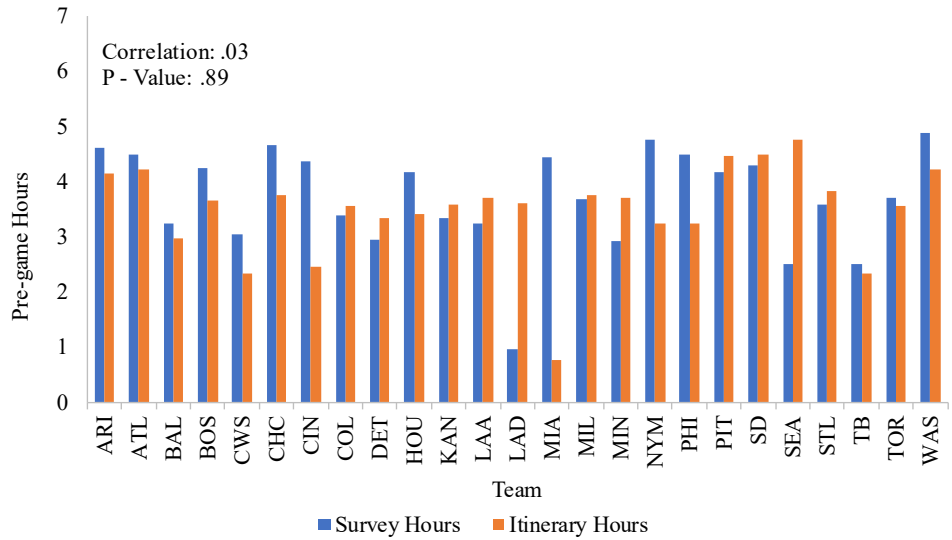








# Home Game Spring Training Hours By Team



# **Exhibit E1**

Correlation Between Average Survey Reponse and Average Plaintiff Testimony By Team  
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Championship Season

Team	Home Day				Home Night			
	Survey	Testimony	Correlation	P-Value	Survey	Testimony	Correlation	P-Value
Arizona Diamondbacks	NA	3.5	0.09	0.64	4.5	6	-0.29	0.14
Atlanta Braves	4.0417	3.75			6.1667	5.75		
Baltimore Orioles	3.6667	3.25			5.4167	6		
Boston Red Sox	4.4	4			6.45	7		
Chicago White Sox	3.6667	3.5			5.4167	6.25		
Cincinnati Reds	3.0417	3.75			5.2917	6.5		
Cleveland Indians	3.4643	3			5.8214	6.5		
Colorado Rockies	3.4375	2.8333333			4.9375	5.7333333		
Detroit Tigers	3.0833	4			4.75	6.5		
Houston Astros	3.7	4			5.8	6.5		
Kansas City Royals	3.5	4			5.1875	6		
Los Angeles Angels	3.5909	3.5			5.5417	6.5		
Los Angeles Dodgers	3.6071	3.75			5.75	5.75		
Miami Marlins	3.85	4			5.3333	7.5		
Milwaukee Brewers	2.7917	4			4.8929	7.25		
Minnesota Twins	3.9375	3			5.1875	6		
New York Mets	5.25	4.625			6	4.75		
New York Yankees	3	3.25			5.75	6.5		
Oakland Athletics	3.3	4.25			5.35	7		
Philadelphia Phillies	3.2083	5			5.5	7		
Pittsburgh Pirates	3.8125	4			5.9375	7		
San Diego Padres	4.5	3.5			6.75	5		
San Francisco Giants	3.75	3.7857143			5.25	5.8428571		
Seattle Mariners	2.8	3.4166667			4.9	6.4166667		
St. Louis Cardinals	2.6786	4.375			4.6563	6.875		
Texas Rangers	3.3611	3.25			5.6944	6.25		
Toronto Blue Jays	3.5	3.25			5.3571	6.75		
Washington Nationals	3.5	2.875			5.1	6.625		



# Correlation Between Average Survey Reponse and Average Plaintiff Testimony By Team Championship Season

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Team	Away Day				Away Night			
	Survey	Testimony	Correlation	P-Value	Survey	Testimony	Correlation	P-Value
Arizona Diamondbacks	NA	3.5	0.13	0.53	2.25	5.5	-0.34	0.08
Atlanta Braves	3.375	4			4.75	5		
Baltimore Orioles	3.25	3.25			4.25	5.5		
Boston Red Sox	4.0625	4			4.4375	5.5		
Chicago White Sox	3.4583	3.5			3.7917	4.5		
Cincinnati Reds	2.75	4			4.375	5.75		
Cleveland Indians	2.6786	3.25			4.4286	4.5		
Colorado Rockies	3.1875	2.8333333			4.0625	4.6666667		
Detroit Tigers	2.375	4			4.5	4.5		
Houston Astros	3.4	4			4.45	5		
Kansas City Royals	3.5833	4			3.75	5		
Los Angeles Angels	3.3611	4			4.125	5		
Los Angeles Dodgers	3.3571	3.75			4.5	5.25		
Miami Marlins	2.875	4.25			4.0417	5.25		
Milwaukee Brewers	2.6667	4			3.8929	5.25		
Minnesota Twins	3.3125	3			4.6875	5		
New York Mets	5.25	4.625			5.25	3.75		
New York Yankees	2.65	3.5			4.25	4.5		
Oakland Athletics	2.75	4.25			4.35	5.25		
Philadelphia Phillies	3.1667	5			4.25	5.25		
Pittsburgh Pirates	3.75	4			4.625	5		
San Diego Padres	4	3.5			5.75	5		
San Francisco Giants	3.5	3.2614286			4.5	5.2857143		
Seattle Mariners	3.1	3.75			4.4	5.0833333		
St. Louis Cardinals	2.5	4.5			3.5938	5.5		
Texas Rangers	3.1389	3.75			5.0278	4.5		
Toronto Blue Jays	3.3571	3.25			4.1429	4.5		
Washington Nationals	2.85	3			4.1	4.375		

# **Exhibit E2**

# Correlation Between Average Survey Reponse and Average Plaintiff Testimony By Team

## Spring Training

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Team	Game				Camp			
	Survey	Testimony	Correlation	P-Value	Survey	Testimony	Correlation	P-Value
Arizona Diamondbacks	8.65	10	-0.06	0.76	7.35	9	0.12	0.55
Atlanta Braves	8.3333	8			5.7083	5		
Baltimore Orioles	7.75	8.5			4.7857	6		
Boston Red Sox	8.4643	10			5.4167	6.75		
Chicago White Sox	7.3611	10			4.3333	8		
Cincinnati Reds	8.125	8			6.25	5		
Cleveland Indians	7.6111	10.25			5.5	6		
Colorado Rockies	7.4583	8.3333333			4.95	5.5		
Detroit Tigers	7.5	8.5			4.4643	5.25		
Houston Astros	8.125	9.5			6.2857	6.5		
Kansas City Royals	7.05	10			4.8	7		
Los Angeles Angels	7.8864	8			5.6875	5		
Los Angeles Dodgers	7.4375	8			5.3438	6		
Miami Marlins	8.5556	9			6.3889	6		
Milwaukee Brewers	7.6563	11.25			4.6944	7.5		
Minnesota Twins	7.3125	8			5.7813	8		
New York Mets	8.0833	10.5			6.5	9.5		
New York Yankees	8.2	9			5.775	7.25		
Oakland Athletics	8.4583	10			5.25	7		
Philadelphia Phillies	8.5833	10.75			7.1667	8		
Pittsburgh Pirates	8.3438	8			6.4375	5		
San Diego Padres	8.95	8			6.55	5		
San Francisco Giants	8.3333	8.1785714			5.7778	5.3928571		
Seattle Mariners	7.6563	8.3333333			6.1563	5.6666667		
St. Louis Cardinals	7.9583	10			5.9375	7		
Texas Rangers	9.25	9.25			5.7292	7		
Toronto Blue Jays	8.4809	7.5			6.9167	5.75		
Washington Nationals	9.25	8.5			6.9375	6.375		

Correlation Between Average Survey Reponse and Average Plaintiff Testimony By Team  
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Fall Instructional League

Team	Game				Camp			
	Survey	Testimony	Correlation	P-Value	Survey	Testimony	Correlation	P-Value
Arizona Diamondbacks	8.625	NA	-0.13	0.59	6.875	NA	0.00	0.99
Atlanta Braves	7.5	8			5.75	5		
Baltimore Orioles	6.75	7			4.25	3		
Boston Red Sox	5.75	8.5			5.4375	4.5		
Chicago White Sox	6.625	10			5.125	8.5		
Cincinnati Reds	8.5	8			5	5		
Cleveland Indians	6.8125	8.5			4.875	8.5		
Colorado Rockies	8.75	7.875			5.25	5.875		
Detroit Tigers	7	NA			2	NA		
Houston Astros	9.25	9.5			5.75	6.5		
Kansas City Royals	6.5	NA			4.25	NA		
Los Angeles Angels	7.3333	8			5.5	5		
Los Angeles Dodgers	7.125	NA			3.625	NA		
Miami Marlins	7.3125	NA			6.3125	NA		
Milwaukee Brewers	NA	9.75			NA	8.75		
Minnesota Twins	6.875	NA			4.625	NA		
New York Mets	7.25	10.5			4.375	10.5		
New York Yankees	6	9			2.875	7.25		
Oakland Athletics	7.75	10			5.25	7		
Philadelphia Phillies	7.5	NA			6	NA		
Pittsburgh Pirates	7.5833	8			5	8		
San Diego Padres	8.875	NA			5.875	NA		
San Francisco Giants	8.25	7.6666667			6	4.6666667		
Seattle Mariners	7.25	8			4.25	5		
St. Louis Cardinals	5.375	8			3.625	5		
Texas Rangers	7.3333	9.5			5.25	8		
Toronto Blue Jays	8.875	7			4.875	6		
Washington Nationals	8.375	8.25			6.375	8.25		

Correlation Between Average Survey Reponse and Average Plaintiff Testimony By Team  
Extended Spring Training

Team	Game				Camp			
	Survey	Testimony	Correlation	P-Value	Survey	Testimony	Correlation	P-Value
Arizona Diamondbacks	8.125	10	-0.11	0.62	5.875	9	-0.08	0.73
Atlanta Braves	7	8			5.5	5		
Baltimore Orioles	7.875	7			5.125	6.5		
Boston Red Sox	8	NA			6.5	NA		
Chicago White Sox	6.65	9			4.4	9		
Cincinnati Reds	4.875	8			7.375	5		
Cleveland Indians	6.5	8			6	8		
Colorado Rockies	5.5	8			4.125	6.1666667		
Detroit Tigers	6	8			3.75	5.5		
Houston Astros	9	NA			5	NA		
Kansas City Royals	5.5	10			3.25	7		
Los Angeles Angels	6.3333	8			4	5		
Los Angeles Dodgers	9.375	8			6.375	6		
Miami Marlins	7.3563	9			5.15	6		
Milwaukee Brewers	6.8333	NA			4	NA		
Minnesota Twins	5.25	8.5			4.125	8.5		
New York Mets	7.375	8.5			5.375	7		
New York Yankees	8.2188	9			6.625	8.25		
Oakland Athletics	5.125	10			4.75	7		
Philadelphia Phillies	7.55	10.75			6.9	8		
Pittsburgh Pirates	7.0625	NA			5.4375	NA		
San Diego Padres	7.3333	NA			5.3333	NA		
San Francisco Giants	7.8333	7			6.0833	5		
Seattle Mariners	7.25	8			5.25	6.3333333		
St. Louis Cardinals	6.6	10			4.35	7		
Texas Rangers	7.5	8.75			4.375	8		
Toronto Blue Jays	7.0833	8			6.3333	5.5		
Washington Nationals	6.8333	8.5			6.3333	6.6666667		

# **Exhibit F**

Player	Team	Home					
		Day			Night		
		Testimony	10th	25th	Testimony	10th	25th
Aaron Meade	Los Angeles Angels	3.5	2.75	3	6.5	5	5.1875
Aaron Senne	Miami Marlins	3.5	3.45	3.75	7.5	4.625	4.875
Bradley McAtee	Colorado Rockies	2.5	2.9	3.125	4.7	4.325	4.4375
Bradley Stone	Miami Marlins	4.5	3.45	3.75	7.5	4.625	4.875
Brandon Henderson	Minnesota Twins	3	2.675	3.6875	6	4	4
Brandon Pinckney	Philadelphia Phillies	4	2.625	2.75	6	4.625	4.8125
Brandon Pinckney	Oakland Athletics	4	3.1	3.25	6	4.55	5
Brett Newsome	Washington Nationals	3	3.2	3.5	7.5	2.95	4.75
Craig Bennigson	Colorado Rockies	3.5	2.9	3.125	6	4.325	4.4375
Daniel Britt	Milwaukee Brewers	5	1.75	2.125	7.5	4.05	4.5
David Quinowski	San Francisco Giants	3	3.55	3.625	6	5.05	5.125
David Quinowski	Baltimore Orioles	3	3.3	3.375	6	5.05	5.125
Dustin Pease	San Diego Padres	3.5	4.5	4.5	5	6.75	6.75
Gaspar Santiago	San Francisco Giants	4.5	3.55	3.625	6	5.05	5.125
Grant Duff	New York Yankees	3	2.625	3	6.5	5.25	5.25
Jacob Kahaulelio	Cincinnati Reds	4	2	2.375	5.5	5	5.25
Jeffrey Nadeau	St. Louis Cardinals	5	2.35	2.75	8	3.925	4.1875
Joel Weeks	San Francisco Giants	4.5	3.55	3.625	6.5	5.05	5.125
Joey Newby	Seattle Mariners	3.75	2.1	2.25	5.75	3.3	4.5
Joey Newby	Los Angeles Dodgers	3.75	2.35	2.875	5.75	5.15	5.375
Jonathan Gaston	Houston Astros	4	3.1	3.25	6.5	4.7	5.75
Jonathan Gaston	Chicago White Sox	4	3	3.3125	6.5	4.5	5.3125
Justin Murray	Oakland Athletics	4.5	3.1	3.25	8	4.55	5
Kristopher Watts	Pittsburgh Pirates	4	2.875	3.4375	7	5.325	5.4375
Kristopher Watts	Washington Nationals	4	3.2	3.5	7	2.95	4.75
Kyle Nicholson	San Francisco Giants	3.5	3.55	3.625	5.5	5.05	5.125
Kyle Woodruff	San Francisco Giants	4	3.55	3.625	5	5.05	5.125
LJ Gagnier	Detroit Tigers	4.5	2.65	2.875	6.5	4.35	4.5
Leonard Davis	Washington Nationals	2.5	3.2	3.5	6.5	2.95	4.75
Leonard Davis	Toronto Blue Jays	2.5	2.95	3.375	6.5	4.9	5.125
Leonard Davis	Colorado Rockies	2.5	2.9	3.125	6.5	4.325	4.4375
Leslie Smith	Detroit Tigers	3.5	2.65	2.875	6.5	4.35	4.5
Mark Wagner	Boston Red Sox	3.5	3.1	4.75	7	5.4	6
Mark Wagner	San Francisco Giants	3.5	3.55	3.625	7	5.05	5.125
Matthew Daly	Toronto Blue Jays	4	2.95	3.375	7	4.9	5.125
Matthew Frevert	St. Louis Cardinals	3.75	2.35	2.75	5.75	3.925	4.1875
Matthew Frevert	Atlanta Braves	3.75	3.125	3.75	5.75	5.5	5.625
Matthew Lawson	Texas Rangers	3	2.5	2.75	6	4.7	5.75
Matthew Lawson	Seattle Mariners	3	2.1	2.25	6	3.3	4.5
Matthew Lawson	Cleveland Indians	3	2.8	3.25	6	5.4	5.5
Michael Liberto	Kansas City Royals	4	2.75	3.125	6	4.225	4.5625
Mitchell Hilligoss	New York Yankees	3.5	2.625	3	6.5	5.25	5.25
Mitchell Hilligoss	Texas Rangers	3.5	2.5	2.75	6.5	4.7	5.75
Nicholas Giarraputo	New York Mets	3	5.25	5.25	6	6	6
Nicholas Giarraputo	Chicago White Sox	3	3	3.3125	6	4.5	5.3125
Oliver Odle	San Francisco Giants	3.5	3.55	3.625	4.9	5.05	5.125
Omar Aguilar	Milwaukee Brewers	3	1.75	2.125	7	4.05	4.5
Omar Aguilar	Cleveland Indians	3	2.8	3.25	7	5.4	5.5
Roberto Ortiz	Arizona Diamondbacks	3.5	NA	NA	6	4.5	4.5
Roberto Ortiz	Baltimore Orioles	3.5	3.3	3.375	6	5.05	5.125
Ryan Hutson	New York Mets	6.25	5.25	5.25	3.5	6	6
Ryan Khoury	Boston Red Sox	4.5	3.1	4.75	7	5.4	6
Ryan Kiel	Seattle Mariners	3.5	2.1	2.25	7.5	3.3	4.5
Ryan Kiel	Cincinnati Reds	3.5	2	2.375	7.5	5	5.25
Tim Pahuta	Washington Nationals	2	3.2	3.5	5.5	2.95	4.75
Witer Jimenez	Philadelphia Phillies	6	2.625	2.75	8	4.625	4.8125

Player	Team	Away					
		Day			Night		
		Testimony	10th	25th	Testimony	10th	25th
Aaron Meade	Los Angeles Angels	4	2.2	2.5	5	2.35	3.375
Aaron Senne	Miami Marlins	3.5	1.875	2.5	4.5	3.375	3.5
Bradley McAtee	Colorado Rockies	2.5	3	3	5	3.65	3.875
Bradley Stone	Miami Marlins	5	1.875	2.5	6	3.375	3.5
Brandon Henderson	Minnesota Twins	3	2.025	2.8125	5	3.15	3.375
Brandon Pinckney	Philadelphia Phillies	4	2.5	2.625	4.5	3.125	3.4375
Brandon Pinckney	Oakland Athletics	4	2.35	2.5	4.5	3.7	4
Brett Newsome	Washington Nationals	3.5	2.35	2.5	5	3.6	3.75
Craig Bennigson	Colorado Rockies	3.5	3	3	5	3.65	3.875
Daniel Britt	Milwaukee Brewers	5	1.875	2.0625	5.5	3.5	3.625
David Quinowski	San Francisco Giants	3	3.3	3.375	5.5	4.3	4.375
David Quinowski	Baltimore Orioles	3	2.65	2.875	5.5	3.65	3.875
Dustin Pease	San Diego Padres	3.5	4	4	5	5.75	5.75
Gaspar Santiago	San Francisco Giants	4.5	3.3	3.375	5.5	4.3	4.375
Grant Duff	New York Yankees	3	2.1	2.25	4	3.5	3.5
Jacob Kahaulelio	Cincinnati Reds	4	1.625	2	5.5	3.75	4
Jeffrey Nadeau	St. Louis Cardinals	5	1.6	1.75	6	2.75	3.3125
Joel Weeks	San Francisco Giants	0.83	3.3	3.375	6.5	4.3	4.375
Joey Newby	Seattle Mariners	3.75	2.45	2.75	5.25	3.15	3.75
Joey Newby	Los Angeles Dodgers	3.75	2.45	3	5.25	3.5	4
Jonathan Gaston	Houston Astros	4	3	3	5	3.55	4
Jonathan Gaston	Chicago White Sox	4	3	3.0625	5	3.375	3.5625
Justin Murray	Oakland Athletics	4.5	2.35	2.5	6	3.7	4
Kristopher Watts	Pittsburgh Pirates	4	3.05	3.5	5	4.4	4.625
Kristopher Watts	Washington Nationals	4	2.35	2.5	5	3.6	3.75
Kyle Nicholson	San Francisco Giants	3.5	3.3	3.375	4.5	4.3	4.375
Kyle Woodruff	San Francisco Giants	4	3.3	3.375	5	4.3	4.375
LJ Gagnier	Detroit Tigers	4.5	2.075	2.1875	5	3.6	4.125
Leonard Davis	Washington Nationals	2.5	2.35	2.5	4	3.6	3.75
Leonard Davis	Toronto Blue Jays	2.5	2.05	2.875	4	3.75	3.75
Leonard Davis	Colorado Rockies	2.5	3	3	4	3.65	3.875
Leslie Smith	Detroit Tigers	3.5	2.075	2.1875	4	3.6	4.125
Mark Wagner	Boston Red Sox	3.5	2.875	3.4375	5.5	2.975	3.3125
Mark Wagner	San Francisco Giants	3.5	3.3	3.375	5.5	4.3	4.375
Matthew Daly	Toronto Blue Jays	4	2.05	2.875	5	3.75	3.75
Matthew Frevert	St. Louis Cardinals	4	1.6	1.75	5	2.75	3.3125
Matthew Frevert	Atlanta Braves	4	2.625	2.8125	5	4.125	4.3125
Matthew Lawson	Texas Rangers	3.5	2.35	2.5	4	3.65	4
Matthew Lawson	Seattle Mariners	3.5	2.45	2.75	4	3.15	3.75
Matthew Lawson	Cleveland Indians	3.5	2.3	2.5	4	3.4	3.875
Michael Liberto	Kansas City Royals	4	3.35	3.5	5	1.85	2.75
Mitchell Hilligoss	New York Yankees	4	2.1	2.25	5	3.5	3.5
Mitchell Hilligoss	Texas Rangers	4	2.35	2.5	5	3.65	4
Nicholas Giarraputo	New York Mets	3	5.25	5.25	4	5.25	5.25
Nicholas Giarraputo	Chicago White Sox	3	3	3.0625	4	3.375	3.5625
Oliver Odle	San Francisco Giants	3.5	3.3	3.375	4.5	4.3	4.375
Omar Aguilar	Milwaukee Brewers	3	1.875	2.0625	5	3.5	3.625
Omar Aguilar	Cleveland Indians	3	2.3	2.5	5	3.4	3.875
Roberto Ortiz	Arizona Diamondbacks	3.5	NA	NA	5.5	2.25	2.25
Roberto Ortiz	Baltimore Orioles	3.5	2.65	2.875	5.5	3.65	3.875
Ryan Hutson	New York Mets	6.25	5.25	5.25	3.5	5.25	5.25
Ryan Khoury	Boston Red Sox	4.5	2.875	3.4375	5.5	2.975	3.3125
Ryan Kiel	Seattle Mariners	4	2.45	2.75	6	3.15	3.75
Ryan Kiel	Cincinnati Reds	4	1.625	2	6	3.75	4
Tim Pahuta	Washington Nationals	2	2.35	2.5	3.5	3.6	3.75
Witer Jimenez	Philadelphia Phillies	6	2.5	2.625	6	3.125	3.4375



# **Exhibit G**

**Survey Respondents Who Answered Spring Training Game Day  
Arrival Question By Module Order**

<b>Spring Training Module Order<sup>1</sup></b>	<b>Eligible Respondents<sup>2</sup></b>	<b>Respondents Who Answered</b>	<b>Respondents Who Skipped</b>	<b>Share Who Skipped</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4) =(2)-(3)</b>	<b>(5) =(4)/(2)</b>
1st	41	39	2	4.9%
2nd	72	66	6	8.3%
3rd	82	75	7	8.5%
4th or More	63	56	7	11.1%
<b>Total</b>	258	236	22	8.5%

**Notes and Sources:**

Data are from Dennis's Attachment 8.

<sup>1</sup> The module order was calculated using the instructions on page 11 of Dennis's Attachment 5 with the least recently performed activity shown first and activities completed in the same year determined by this progression: Spring Training, Extended Spring Training, Regular Season, Fall Instructs, and Off-Season.

<sup>2</sup> Respondents who indicated the most recent season they participated in Minor League Spring Training was 2015-2016.

**Survey Respondents Who Answered Spring Training Home Game Day  
Departure Question By Module Order**

<b>Spring Training Module Order<sup>1</sup></b>	<b>Eligible Respondents<sup>2</sup></b>	<b>Respondents Who Answered</b>	<b>Respondents Who Skipped</b>	<b>Share Who Skipped</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b> <b>= (2) - (3)</b>	<b>(5)</b> <b>= (4) / (2)</b>
1st	41	37	4	9.8%
2nd	72	67	5	6.9%
3rd	82	74	8	9.8%
4th or More	63	55	8	12.7%
<b>Total</b>	<b>258</b>	<b>233</b>	<b>25</b>	<b>9.7%</b>

**Notes and Sources:**

Data are from Dennis's Attachment 8.

<sup>1</sup> The module order was calculated using the instructions on page 11 of Dennis's Attachment 5 with the least recently performed activity shown first and activities completed in the same year determined by this progression: Spring Training, Extended Spring Training, Regular Season, Fall Instructs, and Off-Season.

<sup>2</sup> Respondents who indicated the most recent season they participated in Minor League Spring Training was 2015-2016.

**Survey Respondents Who Answered Spring Training Away Game Day  
Departure Question By Module Order**

<b>Spring Training Module Order<sup>1</sup></b>	<b>Eligible Respondents<sup>2</sup></b>	<b>Respondents Who Answered</b>	<b>Respondents Who Skipped</b>	<b>Share Who Skipped</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4) =(2)-(3)</b>	<b>(5) =(4)/(2)</b>
1st	41	37	4	9.8%
2nd	72	66	6	8.3%
3rd	82	74	8	9.8%
4th or More	63	55	8	12.7%
<b>Total</b>	<b>258</b>	<b>232</b>	<b>26</b>	<b>10.1%</b>

**Notes and Sources:**

Data are from Dennis's Attachment 8.

<sup>1</sup> The module order was calculated using the instructions on page 11 of Dennis's Attachment 5 with the least recently performed activity shown first and activities completed in the same year determined by this progression: Spring Training, Extended Spring Training, Regular Season, Fall Instructs, and Off-Season.

<sup>2</sup> Respondents who indicated the most recent season they participated in Minor League Spring Training was 2015-2016.

**Survey Respondents Who Answered Spring Training Game Day  
Eating Time Question By Module Order**

<b>Spring Training Module Order<sup>1</sup></b>	<b>Eligible Respondents<sup>2</sup></b>	<b>Respondents Who Answered</b>	<b>Respondents Who Skipped</b>	<b>Share Who Skipped</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b> <b>= (2)-(3)</b>	<b>(5)</b> <b>= (4)/(2)</b>
1st	41	38	3	7.3%
2nd	72	67	5	6.9%
3rd	82	73	9	11.0%
4th or More	63	54	9	14.3%
<b>Total</b>	<b>258</b>	<b>232</b>	<b>26</b>	<b>10.1%</b>

**Notes and Sources:**

Data are from Dennis's Attachment 8.

<sup>1</sup> The module order was calculated using the instructions on page 11 of Dennis's Attachment 5 with the least recently performed activity shown first and activities completed in the same year determined by this progression: Spring Training, Extended Spring Training, Regular Season, Fall Instructs, and Off-Season.

<sup>2</sup> Respondents who indicated the most recent season they participated in Minor League Spring Training was 2015-2016.

**Survey Respondents Who Answered Spring Training Non-Game Day  
Arrival Question By Module Order**

<b>Spring Training Module Order<sup>1</sup></b>	<b>Eligible Respondents<sup>2</sup></b>	<b>Respondents Who Answered</b>	<b>Respondents Who Skipped</b>	<b>Share Who Skipped</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b> <b>= (2) - (3)</b>	<b>(5)</b> <b>= (4) / (2)</b>
1st	41	37	4	9.8%
2nd	72	66	6	8.3%
3rd	82	73	9	11.0%
4th or More	63	54	9	14.3%
<b>Total</b>	<b>258</b>	<b>230</b>	<b>28</b>	<b>10.9%</b>

**Notes and Sources:**

Data are from Dennis's Attachment 8.

<sup>1</sup> The module order was calculated using the instructions on page 11 of Dennis's Attachment 5 with the least recently performed activity shown first and activities completed in the same year determined by this progression: Spring Training, Extended Spring Training, Regular Season, Fall Instructs, and Off-Season.

<sup>2</sup> Respondents who indicated the most recent season they participated in Minor League Spring Training was 2015-2016.

**Survey Respondents Who Answered Spring Training Non-Game Day  
Departure Question By Module Order**

<b>Spring Training Module Order<sup>1</sup></b>	<b>Eligible Respondents<sup>2</sup></b>	<b>Respondents Who Answered</b>	<b>Respondents Who Skipped</b>	<b>Share Who Skipped</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b> <b>= (2)-(3)</b>	<b>(5)</b> <b>= (4)/(2)</b>
1st	41	35	6	14.6%
2nd	72	66	6	8.3%
3rd	82	73	9	11.0%
4th or More	63	54	9	14.3%
<b>Total</b>	<b>258</b>	<b>228</b>	<b>30</b>	<b>11.6%</b>

**Notes and Sources:**

Data are from Dennis's Attachment 8.

<sup>1</sup> The module order was calculated using the instructions on page 11 of Dennis's Attachment 5 with the least recently performed activity shown first and activities completed in the same year determined by this progression: Spring Training, Extended Spring Training, Regular Season, Fall Instructs, and Off-Season.

<sup>2</sup> Respondents who indicated the most recent season they participated in Minor League Spring Training was 2015-2016.

**Survey Respondents Who Answered Spring Training Non-Game Day  
Eating Time Question By Module Order**

<b>Spring Training Module Order<sup>1</sup></b>	<b>Eligible Respondents<sup>2</sup></b>	<b>Respondents Who Answered</b>	<b>Respondents Who Skipped</b>	<b>Share Who Skipped</b>
<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b> <b>= (2) - (3)</b>	<b>(5)</b> <b>= (4) / (2)</b>
1st	41	37	4	9.8%
2nd	72	66	6	8.3%
3rd	82	74	8	9.8%
4th or More	63	54	9	14.3%
<b>Total</b>	<b>258</b>	<b>231</b>	<b>27</b>	<b>10.5%</b>

**Notes and Sources:**

Data are from Dennis's Attachment 8.

<sup>1</sup> The module order was calculated using the instructions on page 11 of Dennis's Attachment 5 with the least recently performed activity shown first and activities completed in the same year determined by this progression: Spring Training, Extended Spring Training, Regular Season, Fall Instructs, and Off-Season.

<sup>2</sup> Respondents who indicated the most recent season they participated in Minor League Spring Training was 2015-2016.



# **Exhibit H**

	Counts				Shares			
	Kreigler Subset	All Survey Respondents	Non- Respondents	Total	Kreigler Subset	All Survey Respondents	Non- Respondents	Total
United States	257	646	3,865	4,511	90.5%	89.7%	54.5%	57.8%
Dominican Republic	11	31	1,747	1,778	3.9%	4.3%	24.7%	22.8%
Venezuela	7	15	890	905	2.5%	2.1%	12.6%	11.6%
Panama	0	0	94	94	0.0%	0.0%	1.3%	1.2%
Mexico	1	1	93	94	0.4%	0.1%	1.3%	1.2%
Canada	3	16	77	93	1.1%	2.2%	1.1%	1.2%
Colombia	0	0	75	75	0.0%	0.0%	1.1%	1.0%
Australia	0	2	55	57	0.0%	0.3%	0.8%	0.7%
Curacao	1	1	31	32	0.4%	0.1%	0.4%	0.4%
Nicaragua	0	0	31	31	0.0%	0.0%	0.4%	0.4%
Taiwan	0	0	24	24	0.0%	0.0%	0.3%	0.3%
Republic Of Korea	0	0	17	17	0.0%	0.0%	0.2%	0.2%
Japan	0	0	12	12	0.0%	0.0%	0.2%	0.2%
Netherlands	1	1	11	12	0.4%	0.1%	0.2%	0.2%
Brazil	0	3	7	10	0.0%	0.4%	0.1%	0.1%
Aruba	0	0	9	9	0.0%	0.0%	0.1%	0.1%
Haiti	0	0	7	7	0.0%	0.0%	0.1%	0.1%
Italy	1	1	5	6	0.4%	0.1%	0.1%	0.1%
South Africa	1	1	5	6	0.4%	0.1%	0.1%	0.1%
Germany	0	0	6	6	0.0%	0.0%	0.1%	0.1%
Bahamas	0	0	5	5	0.0%	0.0%	0.1%	0.1%
Guatemala	0	0	4	4	0.0%	0.0%	0.1%	0.1%
El Salvador	0	0	3	3	0.0%	0.0%	0.0%	0.0%
Cuba	0	0	3	3	0.0%	0.0%	0.0%	0.0%
New Zealand	1	1	1	2	0.4%	0.1%	0.0%	0.0%
Czech Republic	0	0	2	2	0.0%	0.0%	0.0%	0.0%
Russian Federation	0	0	1	1	0.0%	0.0%	0.0%	0.0%
Spain	0	0	1	1	0.0%	0.0%	0.0%	0.0%
Ecuador	0	0	1	1	0.0%	0.0%	0.0%	0.0%
France	0	0	1	1	0.0%	0.0%	0.0%	0.0%
Poland	0	0	1	1	0.0%	0.0%	0.0%	0.0%
Honduras	0	1	0	1	0.0%	0.1%	0.0%	0.0%
Belgium	0	0	1	1	0.0%	0.0%	0.0%	0.0%
Argentina	0	0	1	1	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>284</b>	<b>720</b>	<b>7,086</b>	<b>7,806</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Note:  
Those categorized as United States include 103 players from Puerto Rico (6 survey respondents and 97 non-respondents) and 2 players from the Virgin Islands (1 survey respondent and 1 non-respondent).